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This handbook describes several of the more important chemical information resources available and accessible through government and private organizations. The handbook provides a framework for searching and retrieving information on chemical toxicology, environmental effects, spill responses, disposal methods, ambient air and water concentrations, control technologies, and existing regulations. This is a part of the Toxics Integration and Information series.

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Toxics Integration Information Series

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CHEMICAL INFORMATION RESOURCES HANDBOOK

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EPA-560/TIIS-80-001

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Foreword

The Office of Pesticides and Toxic Substances is in the process of identifying the needs for relationships between the Environmental Protection Agency and the States in the area of chemicals management. Included in this study will be the need for a relationship respecting the sharing of chemical information.

This manual was compiled to provide State environmental, health and natural resources staff with a thorough reference of several available and expected chemical information resources. The manual was compiled through a contract with Koba Associates, Inc., a Washington-based consulting firm.

Walter W. Kovalick Jr

Walter W. Kovalick, Jr.
Director
Office of Toxics Integration

INTRODUCTION

The Chemical Information Resources Handbook was developed for presentation at 35 nationwide orientation sessions in chemical information resources. The Environmental Protection Agency (EPA) sponsored these sessions to promote an understanding of the resources available in the ubiquitous field of chemical information. The sessions, as does this handbook, focused on automated information systems because these resources can sharply reduce the time and expense of identifying and obtaining most types of chemical information. Moreover, the management of toxic and hazardous substances requires comprehensive access to timely chemical information from a broad spectrum of sources.

This handbook describes most of the more important chemical information resources available and accessable through government and private organizations. The handbook provides a framework for searching and retrieving information on chemical toxicology, environmental effects, spill responses, disposal methods, ambient air and water concentrations, control technologies, and existing regulations.

We have included both the currently available and proposed chemical information resources so that the handbook user can begin using the existing databases and can also be aware of some of the new sources of information that will be available in the future. One such resource will be available on a limited basis within one year and will provide its users access to many of the individual databases described in this handbook. This resource, the Chemical Substances Information Network (CSIN), is described in detail in Section III.

Federal agencies have broad information-gathering powers under the regulatory statutes -- the Toxic Substances Control Act (TSCA), the Consumer Product Safety Act, the Federal Insecticide, Fungicide, and Rodenticide Act, and the Food, Drug, and Cosmetic Act, among others. Particularly under TSCA, there is a need to obtain substantial amounts of up-to-date information quickly. Therefore, it is important for this information-gathering process to be efficient and for the information to be available to everyone needing it. And so several of the described resources provide data that has been collected by the government.

An important factor to consider when using any chemical information resource, automated or not, is the validity of the data. Data retrieved from a computer is no more valid than the printed resource, or other input, from which it was obtained. The use of automated chemical information resources gives the researcher a slight advantage, because the volume of data available, within the research time alotted, increases dramatically. Thus, if the results of a search on one system is replicated by several others, the validity of the data is not as suspect. However, the strongest method of assessing the validity of the data is using your own judgment based on your requirements for the data and an evaluation, where possible, of the design and materials used in the study that yielded the data.

HOW TO USE THIS HANDBOOK

This handbook of chemical information resources is designed to meet the needs of persons concerned with chemical substances. It gives the chemical information user a guide to bibliographic search systems, computerized data systems, chemical lists, and other relevant publications.

The first step in using this handbook is to identify the types of data/information required. Figure 1 is a matrix which cross-references environmental functions with typical types of data required for their performance. The user should also assess the form of information he or she wishes to use: bibliographic, computerized data, lists of chemicals, or publications containing information and data. The content and form of data or information needed will determine which resources are compatible with the requirements.

Once the type of data needed has been determined, you should refer to the Matrix of Chemical Information Resources beginning on page seven. This matrix relates content and form of information to resources that can meet the needs. Use of this matrix will result in a list of information resources to be considered. The information searcher should then refer to the directory of databases and read the descriptions of these candidate resources.

Based on these descriptions, the information researcher should be able to identify the resources that will meet the needs of any specific situation. For each chemical information resource, the handbook provides:

- description of each data system,
- scope - data content of system,
- file structure,
- access/availability,
- cost for use,
- output form and format.

A practical plan for use of these resources can be developed based on a selective review of each resource description and sample output.

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Figure 1: FUNCTIONAL TOXIC CHEMICAL INFORMATION NEEDS

Function	Chemical Identity	Properties	Product Uses	Toxicology	Environmental Effects	Spill Response	Disposal Method	Air Data	Water Data	Control Technology	Regulations
Environmental Risk Assessment	X	X	X	X	X	X	X	X	X	X	X
Regulatory Options Evaluation	X	X	X	X	X		X	X	X	X	X
Enforcement Claim Development	X	X		X	X					X	X
Spill Cleanup	X	X	X	X	X	X	X		X	X	X
Uncontrolled Landfill Mitigation	X	X	X		X		X		X	X	X

CHEMICAL SUBSTANCES INFORMATION NETWORK - A SYSTEM OF SYSTEMS

The Chemical Substances Information Network (CSIN) is being developed in response to the massive data requirements of chemical regulation, toxicological research, chemical manufacture, and related activities. The system will place a valuable new tool, capable of accessing diverse types of chemical-related data, in the hands of federal and local government agencies, scientists, educators, public interest groups, and others. This will be accomplished by linking and coordinating data from several independent chemical-related information systems; which together will provide access to greater capabilities than any existing system currently supplies.

The network will meet information needs more effectively than the multiple specialized data systems. At this time, no single specialized data system satisfies all user requirements. The network will accommodate differences as they evolve, providing both the integration and diversity that are needed.

CSIN's prime goals are to simplify chemical data acquisition and to make comprehensive data available to a broad user population. Objectives related to the fulfillment of these goals include:

- integrating relevant federal and private databases in a coordinated fashion;
- providing access to a variety of databases without opening several accounts and learning various log-on and searching procedures;
- reducing the time involved in conducting a data search;
- using the results from one information resource to formulate queries to other resources; and
- providing the user with an interactive source word thesaurus capable of relating the input subject to the system vocabulary and ultimately identifying a list of CSIN resources relevant to the subject.

Figure 2 illustrates the prototype network system. Users will use the network through the public telecommunications network accessible through online terminals. Chemical identities will be determined through the Chemical Structure Nomenclature System (CSNS). For each chemical identity a unique ID number, called the Chemical Abstracts Service (CAS) Registry number will be ascertained.

Once the substance has been identified through the CSNS, the National Library of Medicine (NLM), Chemicals in Commerce Information System (CICIS), and commercially available systems will be simultaneously accessable for chemical information. The network component systems will provide hard data , as well as bibliographic and research data, including:

- nomenclature
- properties
- production and commerce
- products and uses
- exposure
- effects
- studies and research
- regulations and controls.

CSIN will provide system users with greater capabilities than any single chemical information system that is currently available. Functional capabilities currently envisioned include:

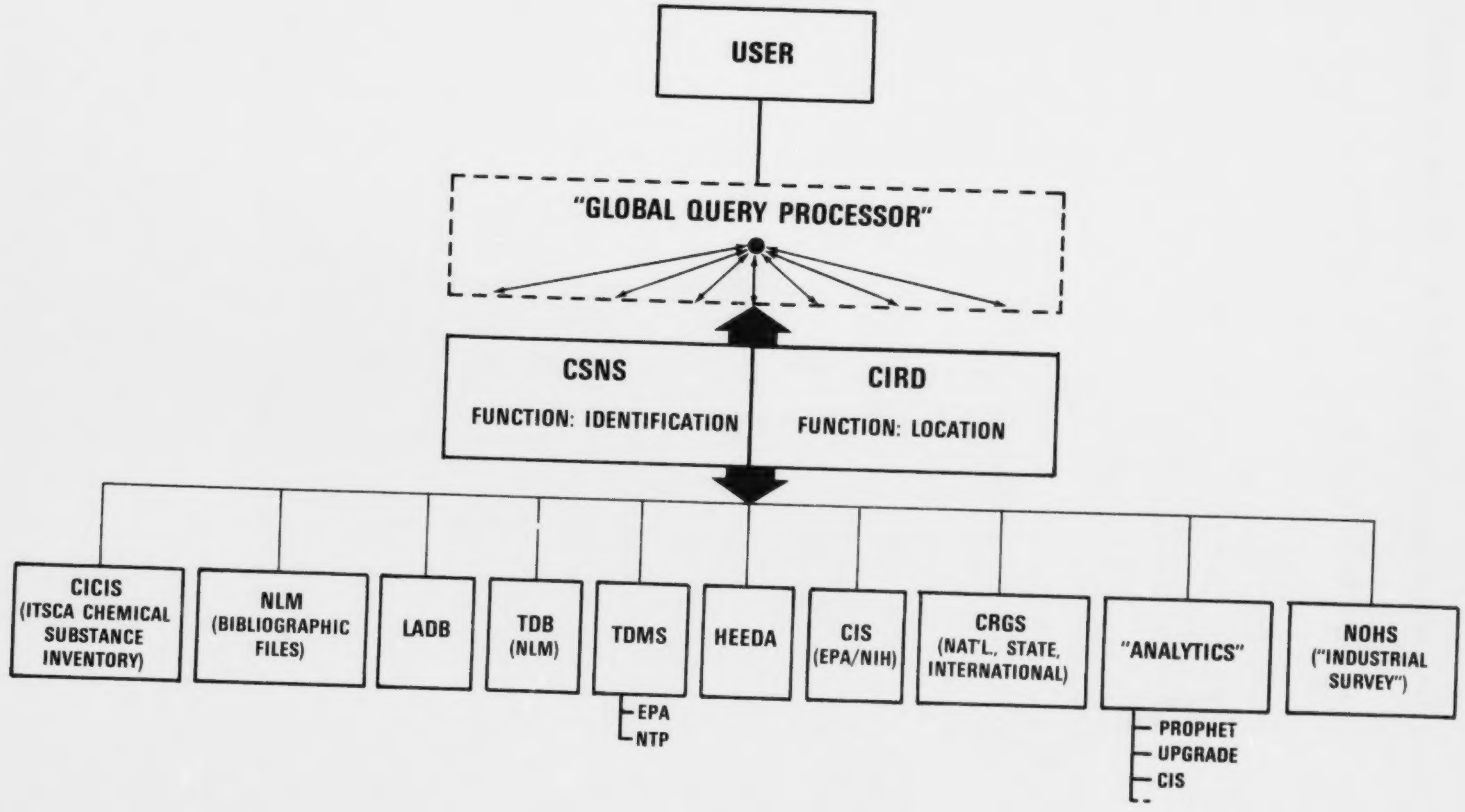
- determining the location of data relevant to the user's request in the network;
- formulating queries to various systems in the network to retrieve relevant data;
- using the results of queries from one information resource to formulate queries to other databases;
- collecting and integrating results from several information resources and delivering them to the user;
- a global query language which allows a user to access data from various databases with a single inquiry;
- user defined query procedures; and
- direct use of certain CSIN components when such access is the best means of supplying the needed data.

CSIN will provide access to virtually every discipline relating to chemicals and their management. The current pre-prototype version of CSIN provides the user with the ability to identify chemicals on the basis of chemical name or structure; supplies online bibliographic reference to chemical, toxicological, and medical information; and provides access to the production, biological and environmental effects, and exposure of specified chemicals in commerce. Future capabilities may come from databases which contain data on federal and state regulations regarding toxic substances; protocols for ongoing toxicology experiments; baseline pathology data on control animal strains; additional bibliographic data from various private and public sources; and user prompted graphic data evaluation of monitoring and other numeric data.

Further information on the development of CSIN may be obtained from:

Dr. Sidney Siegel
Co-Network Administrator
CSIN
or
Mr. Gerry Brown
Information Scientist
Office of Pesticides and Toxic Substances
(TS-777)
U.S. Environmental Protection Agency
401 M Street, S.W.
Washington, D.C. 20460

Figure 2


USER
"GLOBAL QUERY PROCESSOR"
CSNS
FUNCTION: IDENTIFICATION
CIRD
FUNCTION: LOCATION
CICIS
(ITSCA CHEMICAL SUBSTANCE INVENTORY)
NLM
(BIBLIOGRAPHIC FILES)
LADB
TDB
(NLM)
TDMS
EPA
NTP
HEEDA
CIS
(EPA/NIH)
CRGS
(NAT'L, STATE, INTERNATIONAL)
"ANALYTICS"
PROPHET
UPGRADE
CIS
NOHS
("INDUSTRIAL SURVEY")

DIRECTORY

This section of the handbook is a compilation of chemical information resource descriptions. For each resource, the following data are provided:

- scope of information available to the user of the database;
- access procedures;
- cost of conducting a search, where this information is available; and
- sample search/output of the database, where available.

The following is a glossary of symbols commonly found in the sample searches of the various databases.

AB	Abstract
AN	Accession Number
AU	Authors
CN	NAL Call Number
DT	Document Type
IT	Index Terms
LA	Language
NO	Notes
OS	Organizational Source
PD	Publication Date
SN	Source Name
SO	Source
TI	Title
TR	Translation

Preceding page blank

MATRIX OF CHEMICAL INFORMATION RESOURCES

	SEARCHABLE BY CHEMICAL IDENTITY			MODE OF OUTPUT				PRESENT NETWORK				COVERAGE										
				A	B	C	D															
	CAS NO	SYNONYMS	STRUCTURE/ FRAGMENTS	BIBLIOGRAPHIC SEARCH	COMPUTERIZED DATA	LIST OR REFERRAL	PUBLICATION	NLM	CIS	ORBIT	DIALOG	PRODUCERS	PROPERTIES	USE DATA	TOXICOLOGY	ENV EFFECTS	SPILL RESPONSE	DISPOSAL METHODS	AIR DATA	WATER DATA	CONTROL TECHNOLOGY	REGULATIONS
AEROS					●								●	●					●			
AGRICOLA	●	●		●						●	●	●	●	●	●			●			●	●
APILIT		●		●						●			●	●								
APIPAT	●	●		●						●		●		●								
APTIC	●	●		●	●						●				●				●		●	
BIOSIS				●						●	●	●	●	●	●	●	●	●	●	●		●
CAB				●			●				●	●	●	●	●			●			●	●
CANCERLIT	●			●				●							●							
CBDS	●	●		●	●		●								●							
CDA		●		●			●				●		●	●	●	●	●	●	●	●	●	●
CEH							●					●		●								
CFCP		●			●							●	●	●								
CHEM ABSTRACTS	●	●		●			●			●	●	●	●	●	●	●	●	●	●	●	●	●
CHEMLINE	●	●	●		●			●				●										
CHEMNAME	●	●	●		●						●		●		●							
CHEMTREC		●				●											●		●	●		
CICIS	●				●							●	●	●								
CIN	●	●		●						●	●	●		●								●
CLAIMS/CHEM	●	●		●	●						●	●		●								
CLAIMS/CLASS	●	●		●	●						●	●		●								
CNMR	●		●		●				●				●									
COMPENDEX	●	●		●						●	●							●			●	
CPD		●					●					●		●								
CRECORD		●								●												●
*CRGS	●			●																		●
CRR		●		●																		●
CRYST		●			●		●						●									
CTCP	●	●			●		●					●			●							
CURR/CONT		●		●			●					●	●	●	●	●	●	●	●	●	●	●
DCP							●					●		●								
*ECDIN	●	●	●		●							●	●	●	●	●	●		●	●	●	●
EIS PLANTS		●		●							●	●		●								
EMIC	●	●		●			●								●							
ENERGYLINE	●	●		●						●	●		●	●	●						●	●
ENVIROLINE		●		●						●	●	●	●	●	●	●	●	●	●	●	●	●
ETIC	●	●		●											●	●						●

MATRIX OF CHEMICAL INFORMATION RESOURCES (cont.)

	SEARCHABLE BY CHEMICAL IDENTITY			MODE OF OUTPUT				PRESENT NETWORK				COVERAGE										
				A	B	C	D															
	CAS NO	SYNONYMS	STRUCTURE/ FRAGMENTS	BIBLIOGRAPHIC SEARCH	COMPUTERIZED DATA	LIST OR REFERRAL	PUBLICATION	NLM	CIS	ORBIT	DIALOG	PRODUCERS	PROPERTIES	USE DATA	TOXICOLOGY	ENV EFFECTS	SPILL RESPONSE	DISPOSAL METHODS	AIR DATA	WATER DATA	CONTROL TECHNOLOGY	REGULATIONS
FED INDEX		●		●						●	●											●
FRSS	●			●					●													●
FSTA	●	●		●						●	●			●	●			●		●	●	●
*HEEDA	●	●	●		●								●		●	●						
HMSM		●															●					
IEDC		●			●								●									
INSPEC	●	●		●						●	●								●		●	
IRLG						●						●	●	●	●	●	●	●	●	●	●	●
ISMEC	●	●		●						●	●										●	
KIRK-OTHMER		●					●						●	●	●	●	●				●	●
LADB					●											●						
MEDLINE	●	●		●				●								●	●					
MERCK		●						●					●		●							
METADEX	●	●		●							●			●	●			●			●	
MRIS	●	●		●							●				●	●	●	●		●		
MSSS	●			●					●				●									
NFPA							●							●			●					
NIOSHTIC	●	●		●											●	●						
NOAA		●		●								●	●	●	●	●	●	●	●	●	●	●
NOHS		●			●		●							●	●				●			●
NSF-HCL		●				●							●	●	●	●			●	●		
NSRDS		●			●								●									
NTIS		●		●						●	●	●	●	●	●	●	●	●	●	●	●	●
OA	●	●		●			●			●	●		●		●	●	●			●	●	●
OCPDB	●	●			●							●	●	●	●							
OHM-TADS	●	●			●				●				●	●	●	●	●	●		●		
PAPERCHEM		●		●						●			●	●							●	
PDSM	●	●							●				●									
PIRA		●		●							●	●	●	●	●							
POISINDEX		●		●									●		●							
POLLUTION		●		●			●			●	●		●		●	●	●	●	●	●	●	●
PREDICASTS		●		●	●						●	●		●							●	
RTECS	●	●			●		●	●	●						●	●						●
SAFETY		●					●					●	●	●	●	●	●	●	●	●	●	●
SANSS	●	●	●		●				●				●									
SCISEARCH		●		●							●	●	●	●	●	●	●	●	●	●	●	●

MATRIX OF CHEMICAL INFORMATION RESOURCES (cont.)

	SEARCHABLE BY CHEMICAL IDENTITY			MODE OF OUTPUT				PRESENT NETWORK				COVERAGE										
				A	B	C	D															
	CAS NO	SYNONYMS	STRUCTURE/ FRAGMENTS	BIBLIOGRAPHIC SEARCH	COMPUTERIZED DATA	LIST OR REFERRAL	PUBLICATION	NLM	CIS	ORBIT	DIALOG	PRODUCERS	PROPERTIES	USE DATA	TOXICOLOGY	ENV EFFECTS	SPILL RESPONSE	DISPOSAL METHODS	AIR DATA	WATER DATA	CONTROL TECHNOLOGY	REGULATIONS
SPIN		●		●							●		●									
SSIE		●			●					●	●	●	●	●	●	●	●	●	●	●	●	●
STORET	●	●			●															●		
SYNORG	●	●					●					●	●	●								
TDB		●			●			●							●	●						
*TDMS	●	●													●	●						
TITUS		●		●						●		●	●	●	●	●					●	●
TOXLINE	●	●		●				●							●	●						
TOX-TIPS	●	●					●	●							●	●						
TRPD		●					●								●	●						
TULSA		●		●			●			●		●	●	●	●	●	●	●	●	●	●	●
UPGRADE		●			●										●	●			●	●		
USDA/CRSIS		●		●							●	●	●	●	●	●	●	●	●	●	●	●
USP		●					●						●		●							
WDROP	●	●			●				●											●		
WORLD TEX		●		●			●					●	●	●	●	●	●		●		●	●
XTAL	●	●			●								●									

*Currently not available

AEROS

Scope:

The Aerometric and Emissions Reporting System (AEROS) was established by the Environmental Protection Agency to serve as a management information system for EPA's air pollution research and control programs. As such, AEROS is mainly concerned with the collection, processing, and reporting of basic air pollution data. Various supplementary data files are also maintained to provide additional information valuable for the preparation and analysis of air pollution data.

The major data components of AEROS are ambient air quality data and air pollution source and emissions data. The former consists of air quality monitoring site descriptions and their data, plus pollutant and method reporting codes. Emission point sources test results are also included. The outputs are published reports and raw data output listings. Volume I of the reports is a system summary. Volume II is a system user manual. Volume III, the AEROS Summary and Retrieval Manual, is intended for those who want to obtain data from AEROS. Volume III describes AEROS reports, how they may be used, and gives instructions on how to obtain them. Volume IV is the National Air Data Branch (NADB) Internal Operations Manual, which documents, in detail, all NADB procedures related to AEROS. Certain portions of Volume IV may be of interest to persons interested in all details of AEROS operations, but is intended mainly as a guide for NADB personnel. Volume V is the AEROS Coding Manual. It contains tables of standard emission codes for use with Volume II.

Data Files:

AEROS consists of ten data storage and retrieval subsystems:

1. The National Emissions Data System (NEDS), which stores and reports source and emissions-related data for the five criteria pollutants (particulates, SOx, NOx, CO, and hydrocarbons).
2. The Storage and Retrieval of Aerometric Data (SAROAD) system, which stores and reports information relating to ambient air quality covering 65 pollutants and which includes site data.
3. The Hazardous and Trace Substance Emissions System (HATREMS), which stores and reports sources and emissions data for non-criteria pollutants.
4. The Source Test Data (SOTDAT) system, which stores and retrieves relevant technical data collected during source emission measurements (i.e., stack tests).
5. The State Implementation Plans (SIPS) regulation system, which provides retrievals of EPA-approved state air pollution control regulations.

6. The Emissions History Information System (EHIS), which provides historical trends information on nationwide emissions, and may also function as a computerized technique for examination of air pollutant emissions scenarios.

7. The Weighted Sensitivity Analysis Program (WSAP), which operates on NEDS data to compute the variance which can be tolerated in the emission estimate for each source category in order that some overall user-specified limit shall not be exceeded.

8. The Source Inventory and Emission Factor Analysis (SIEFA) program, which complements WSAP by computing the actual (as opposed to allowable) imprecision in emission estimates for each source category in NEDS due to imprecision in emission inventory techniques and source data.

9. The Computer Assisted Area Source Emissions (CAASE) System, which calculates county ambient emissions levels.

10. The Regional Emissions Projection System (REPS), which does regional emission projections up to the year 2000.

Access:

Standard AEROS reports are published periodically and are available from the EPA Air Pollution Technical Information Center (APTIC) at Research Triangle Park, NC, or the National Technical Information Service (NTIS) in Springfield, VA. Many of the standard published reports and a number of additional standard reports are also readily available from the National Air Data Branch (NADB), Research Triangle Park, NC, or from the ten EPA Regional Offices. To meet requirements not met by standard AEROS reports, it is also often possible to restructure and report data as required in response to special requests.

Cost:

Not available.

Sample Search/Output:

The AEROS data base provides the following types of standard reports:

1. Particulate (total suspended particulates).

2. Sulfur dioxide, daily values.

3. Sulfur dioxide, 24-hour averages.

4. Sulfur dioxide, 3-hour averages.

5. Sulfur dioxide, 1-hour averages.

6. CO, 1-hour averages.
7. CO, 8-hour averages.
8. Total oxidants.
9. NOx, daily averages.
10. NOx, hourly averages.

In addition, it provides inventory reports by site, or by pollutant. Below is an example of an inventory report by pollutant for the state of Alabama.

```
                         NATIONAL AEROMETRIC DATA BANK
                         STATE INVENTORY BY POLLUTANT
                                   ALABAMA

--------------------------------------------------------------------------------------------------
POL-RTN              POLLUTANT    SITE      AG/   LOCATION          INT   UNIT         NUM   MAX   ARITH
 CODE                  NAME       CODE      PRG     NAME            CODE  CODE  YEAR   OBS   OBS   MEAN
--------------------------------------------------------------------------------------------------

1110191  PARTICULATE           010020001  F01  ABBEVILLE           7    01   1974   41   123.  42.
                                                                   7    01   1975   34    56.  27.   *
                                                                   7    01   1976   45    62.  30.
                                                                   7    01   1977   18    58.  33.   *
                               010060001  F01  ALEXANDRIA CITY     7    01   1974   38    85.  38.
                                                                   7    01   1975   22    61.  31.   *
                                                                   7    01   1976   29    68.  38.
                                                                   7    01   1977   38   492.  47.
                               010100001  F01  ANDALUSIA           7    01   1972   37   118.  58.
                                                                   7    01   1973   33   188.  57.
                                                                   7    01   1974   19   105.  49.   *
                                                                   7    01   1975   14    58.  31.
                                                                   7    01   1976   24    74.  42.
                                                                   7    01   1977   45   278.  49.
                               010120001  F01  ANNISTON            7    01   1972   39   133.  81.   *
                                                                   7    01   1973   38   103.  62.
                                                                   7    01   1974   18   106.  67.
                                                                   7    01   1975   28    97.  45.   *
                                                                   7    01   1976   47   110.  53.
                                                                   7    01   1977   56   231.  69.
                               010120002  F0   ANNISTON            7    01   1975   17    64.  36.   *
                                                                   7    01   1976   53   192.  49.
                                                                   7    01   1977   50   104.  52.
                               010160001  601  ATHENS              7    01   1973   42   137.  73.   *
                                                                   7    01   1974   55   157.  87.
                                                                   7    01   1975   42   158.  69.   *
                                                                   7    01   1976   55   148.  68.
                                                                   7    01   1977   54   152.  63.
                               010160002  601  ATHENS              7    01   1973   37   112.  71.   *
                                                                   7    01   1974   36   188.  73.   *
```

AGRICOLA

Scope:

AGRICOLA (Agricultural Online Access) is produced by the National Agriculture Library (NAL) of the U.S. Department of Agriculture (USDA). AGRICOLA serves as a document locator and bibliographic control system for the NAL collection and is also used to print cards for NAL's card catalogs, the Bibliography of Agriculture, The National Agricultural Library Catalog, and the Catalog of the Food and Nutrition Information and Educational Materials Center. This extensive file provides comprehensive coverage of newly acquired worldwide publications in agriculture and related fields. Prior to July 1976, AGRICOLA was known as CAIN (Cataloging and Indexing).

AGRICOLA covers the field of agriculture in its broadest sense. Some of the specific areas covered are:

- Agricultural Economics
- Agricultural Engineering
- Agricultural Products
- Agriculture in General
- Animal Industries
- Botany
- Chemistry
- Energy in Agriculture
- Entomology
- Fertilizers
- Foods
- Forestry
- Human Nutrition
- Hydroponics
- Pesticides
- Plant Sciences
- Pollution
- Rural Sociology
- Soils
- Veterinary Medicine
- Water Management

Access:

AGRICOLA is produced by NAL and is available through the DIALOG and ORBIT information retrieval systems. For information on how to access DIALOG and ORBIT, consult Appendix A.

Cost:

The cost of using AGRICOLA is $25 per connect hour and $0.05 per citation.

Sample Search/Output:

```
USER:
PARATHION AND HUMAN
PROG:
SS 1 PSTG (5)
SS 2 /C7
USER:
PRINT FULL
```

Sample Search/Output (continued):

```
PROG:

-1-
AN  - 789176660
TI  - HUMAN OCCUPATIONAL ILLNESS PROBLEMS DUE TO ETHYL PARATHION
      EXPOSURE IN CALIFORNIA IN 1975
AU  - PEOPLES, S A
AU  - MADDY, K T
AU  - TOPPER, J
SO  - VET HUM TOXICOL, 20 (5):  327-329.
PD  - 1978 OCT
DT  - ARTICLE
SN  - US PUB
LA  - ENG
CN  - SF601.A47
PCC - 456000
IT  - CALIFORNIA
```

APILIT

Scope:

American Petroleum Institute Literature (APILIT) covers literature pertaining to the petrochemical and petroleum refining industry. This literature includes scientific, technical and engineering developments.

Access:

APILIT is available through the ORBIT information retrieval system. For information about how to access ORBIT, consult Appendix A.

Cost:

The cost of conducting a search on APILIT is $65 per connect hour and $0.11 per citation.

Sample Search/Output:

```
YOU ARE NOW CONNECTED TO THE APILIT DATABASE.
COVERS 1964 THRU 1980 (8007)

SS  1/C?
USER:
DIBUTYL PHTHALATE

PROG:
SS  1 PSTG (82)

SS  2/C?
USER:
PRINT 1 FULL

PROG:

-1-
AN  -  2731626
TI  -  THE ANALYSIS OF PRIORITY POLLUTANTS BY CROSSED-BEAM LC ((LIQUID
       CHROMATOGRAPHY)) /MS ((MASS SPECTROMETRY))
AU  -  MCADAMS M J; VESTAL M L
OS  -  DOW CHEM. CO.
OS  -  UNIV. HOUSTON
SO  -  J. CHROMATOGR. SCI. V18 N.3 110-11 (3/10/88) IN ENGLISH
CC  -  MEASUREMENT METHODS
```

Sample Search/Output (continued):

```
IT  -  AERATION; ANALYTICAL METHOD*; BENZENE RING; BENZO(A)PYRENE;
       BENZO(GHI) PERYLENE; CHLORINE ORGANIC; CHROMATOGRAPHY*; COMPOUNDS;
       C12; C13-16; C17-25; DIBUTYL PHTHALATE; DIOCTYL PHTHALATE; DISTRICT
       3 DOW CHEMICAL; EFFICIENCY; ELECTRIC CURRENT; ELECTRICITY; ELECTRON
       BEAM; ETHER; FUSED OR BRIDGED RING; HALOGEN ORGANIC; HYDROCARBON;
       INJECTION; LIQUID CHROMATOGRAPHY*; LOUISIANA; MASS SPECTROSCOPY*;
       MONOOLEFINIC; MULTIAMINE; MULTICARBOXYLIC ESTER; MULTIOLEFINIC;
       NORTH AMERICA; OXYGEN ORGANIC; POTABALE WATER; SATURATED
       CARBOCYCLIC; SATURATED CHAIN; SEPARATION EQUIPMENT; SETTER;
       SETTLING POND; SINGLE STRUCTURE TYPE; SPECTRAL ANALYSIS*; STRAIGHT
       CHAIN; UNSATURATED CARBOCYCLIC; USA; WATER; WATER POLLUTANT; 5
       MEMBER RING; PRIOR TREATMENT; SUBSTANCE DETERMINED.
ST  -  NEW ORLEANS, LOUISIANA; PRIORITY
LT  -  AERATION+PRIOR TREATMENT.  BENZENE RING+CHLORINE
       ORGANIC+C12+ETHER+HALOGEN ORGANIC+SINGLE STRUCTURE TYPE+SUBSTANCE
       DETERMINED+WATER POLLUTANT.  BENZENE RING+C13-16+C17-25+DIBUTYL
       PHTHALATE+DIOCTYL PHTHALATE+MULTICARBOXYLIC ESTER+SATURATED
       CHAIN+STRAIGHT CHAIN+SUBSTANCE DETERMINED+WATER POLLUTANT.
       BENZENE RING+C17-25+FUSED OR BRIDGED
       RING+HYDROCARBON+MONOOLEFINIC+MULTIOLEFINIC+SATURATED
       CARBOCYCLIC+SINGLE STRUCTURE TYPE+SUBSTANCE
       DETERMINED+UNSATURATED CARBOCYCLIC+WATER POLLUTANT+5 MEMBER RING.
       BENZENE RING+BENZO(A)PYRENE+BENZO(GHI)PERYLENE+C17-25+FUSED OR
       BRIDGED RING+HYDROCARBON+SINGLE STRUCTURE TYPE+SUBSTANCE
       DETERMINED+WATER POLLUTANT.  BENZENE RING+COMPOUNDS+OXYGEN
       ORGANIC+WATER POLLUTANT.  BENZENE RING+C12+MULTIAMINE+SINGLE
       STRUCTURE TYPE+SUBSTANCE DETERMINED+WATER POLLUTANT.
AB  -  THE ANALYSIS OF PRIORITY POLLUTANTS BY CROSSED-BEAM LC ((LIQUID
       CHROMATOGRAPHY))/MS ((MASS SPECTROMETRY)) HAS BEEN A USEFUL
       ALTERNATIVE TO GAS CHROMATOGRAPHIC (GC) ANALYSIS, SINCE THE
       PROBLEMS ASSOCIATED WITH EXTENSIVE COLUMN CONDITIONING WITH GC,
       ESPECIALLY FOR BENZIDINE AND OTHER AMINES, ARE NOT PRESENT WITH LC
       WHEN AQUEOUS SOLVENTS ARE USED.  FOR EXAMPLE, A MIXTURE OF
       BENZIDINE, 4-CHLOROPHENYL PHENYL ETHER, DI-N-OCTYL PHTHALATE,
       BENZO(K)FLUORANTHENE, BENZO(.ALPHA.)PYRENE, BENZO(GHI)PERYLENE, AND
       INDENO(1,2,3 CD)PYRENE WAS EFFICIENTLY SEPARATED BY LC/MS, WITH 0.2
       .MU.G INJECTIONS, ON A PARTISIL 10-ODS/2 COLUMN WITH 10% WATER IN
       METHANOL.  OTHER EXAMPLES OF LC/MS SEPARATIONS INCLUDE DI-N-BUTYL
       AND DI-N-OCTYL PHTHALATE IN NEW ORLEANS DRINKING WATER AND SEVERAL
       PHENDLIC DERIVATIVES IN AN RERATED INDUSTRIAL LAGOON.
       CHROMATOGRAMS AND GRAPH.
```

APIPAT

Scope:

American Petroleum Institute Patents (APIPAT) covers patents of the petrochemical and petroleum refining industry from the U.S., Canada, South Africa, Holland, Belgium, Italy, France, Germany, Great Britain, and Japan.

Access:

APIPAT is available through the ORBIT information retrieval system. For information about how to access ORBIT, consult Appendix A.

Cost:

The cost of conducting a search on APIPAT is $65 per connect hour and $0.11 per citation.

Sample Search/Output:

```
SS  2/C?
USER:
FILE APIPAT

PROG:
ELAPSED TIME ON NTIS:  0.11 HRS.
YOU ARE NOW CONNECTED TO THE APIPAT DATABASE.
COVERS 1964 THRU JUNE 1980 (8006)

SS  1/C?
USER:
PETROLEUM AND SPILL

PROG:
SS  1 PSTG (101)

SS  2/C?
USER:
PRINT 1 FULL

PROG:

-1-
AN  -  72420460
TI  -  WICKING COMPSN - FOR BURNING OIL FROM WATER SURFACES
AU  -  GULF RESEARCH + DEVELOPMENT CO
SO  -  US 3696051 I.10 3 72 F.US 10 1 70 (077364) DERWENT NO. 67457T
CC  -  WATER POLLUTION
```

Sample Search/Output (continued):

```
IT  -  ACTIVATION; ADDITIVE; ADSORBENT; AIR POLLUTION; ASPHALT; BENZENE
       RING; BUOYANCY; BURNER; CAPILLARY PHENOMENON; CLAY MINERAL; COLOR;
       COMBUSTION; COMPOSITION; COMPOUNDS; CONCENTRATION; CONTROL; CRUDE
       OIL; CRUDE OIL; (WELL); C10; C12; C17-25; C26 AND UP; DENSITY;
       DICYCLOPENTADIENYLIRON; EVAPORATION; EXPANSION; FILM; FUSED OR
       BRIDGED RING; GLASS; GROUP IVA; GROUP VIA; GROUP VIII; GULF OIL;
       HEATING EQUIPMENT; IDE; IMPREGNATING; INCINERATION*; IRON; LAYERED;
       LIPOPHILIC; MINERAL; MONOOLEFINIC; MULTIOLEFINIC; OIL WASTE/A;
       OPTICAL PROPERTY; ORGANOMETALLIC; OXYGEN; PARTICLE; PARTICLE SIZE;
       PARTICULATES; PERLITE; PETROLEUM; PHASE CHANCE; PHYSICAL PROPERTY;
       POLLUTION CONTROL; PUMICE; REGENERATION; ROCK; SALINE WATER;
       SATURATED CARBOCYCLIC; SATURATED CHAIN; SILICA; SILICATE MINERAL;
       SILICON; SINGLE STRUCTURE TYPE; SMOKE; SMOKE SUPPRESSOR; SORBENT;
       SPILL; SURFACE; THIN FILM; UNSATURATED CARBOCYCLIC; US PAT;
       VERMICULITE; WASTE DISPOSAL*; WASTE MATERIAL/A; WATER; WATER
       POLLUTANT; WATER POLLUTION; WAX; 5 MEMBER RING; 6 MEMBER RING
LT  -  ADDITIVE+C10+DICYCLOPENTADIENYLIRON+GROUP
       VIII+IRON+MULTIOLEFINIC+ORGANOMETALLIC+SINGLE STRUCTURE
       TYPE+SMOKE SUPPRESSOR+UNSATURATED CARBOCYCLIC+5 MEMBER RING
       ADDITIVE+C12+GROUP VIII+IRON+MULTIOLEFINIC+SATURATED CHAIN+SMOKE
       SUPPRESSOR+UNSATURATED CARBOCYCLIC+5 MEMBER RING
       ADDITIVE+BENZENE RING+C26 AND UP+FUSED OR BRIDGED RING+GROUP
       VIII+IRON+MONOOLEFINIC+MULTIOLEFINIC+SATURATED CARBOCYCLIC+SINGLE
       STRUCTURE TYPE+SMOKE SUPPRESSOR+UNSATURATED CARBOCYCLIC+5 MEMBER
       RING+6 MEMBER RING.  ADDITIVE+BENZENE RING+C17-25+FUSED OR BRIDGED
       RING+GROUP VIII+IRON+MONOOLEFINIC+MULTIOLEFINIC+SINGLE STRUCTURE
       TYPE+SMOKE SUPPRESSOR+UNSATURATED CARBOCYCLIC+5 MEMBER RING.
       ADSORBENT+CLAY MINERAL+GLASS+GROUP IVA+GROUP
       VIA+IDE+MINERAL+OXYGEN+PARTICLE+PERLITE+PUMICE+ROCK+SILICA+SILI-
       CATE MINERAL+SILICON+SORBENT+VERMICULITE.  BENZENE
       RING+COMPOUNDS+FUSED OR BRIDGED RING+GROUP
       VIII+IRON+MULTIOLEFINIC+SATURATED CHAIN+UNSATURATED CARBOCYCLIC+5
       MEMBER RING.  CRUDE OIL+CRUDE OIL (WELL) +FILM+LAYERED+OIL
       WASTE/A+PETROLEUM+SPILL+THIN FILM+WASTE MATERIAL WASTE
       MATERIAL/A+WATER POLLUTANT+WATER POLLUTION.  SALINE WATER+SURFACE+
       WATER.
```

APTIC

Scope:

The Air Pollution Technical Information Center (APTIC) database is a comprehensive resource on all aspects of air pollution and its effects, prevention, and control. The APTIC database includes abstracts of selected technical literature acquired by the Air Pollution Technical Information Center, including all abstracts that appeared in Air Pollution Abstracts (no longer published). APTIC covers the field of air pollution in the broadest sense, including the social, political, legal, and administrative aspects of the field. General subjects treated in this database are as follows:

- Atmospheric Interaction
- Basic Science and Technology
- Control Methods
- Economic Aspects
- Effects on Human Health
- Effects on Materials
- Effects on Plants and Livestock
- Emission Sources
- Government Participation (Legal and Administrative)
- Measurement Methods
- Pollution Data (Air Quality and Emission Inventories)
- Social Aspects and Public Involvement
- Standards and Criteria

Access:

APTIC is available through the DIALOG information retrieval system. Refer to Appendix A for information on how to access DIALOG.

Cost:

The cost of searching APTIC is $36 per connect hour and $0.10 per citation.

Sample Search/Output (continued):

```
? SELECT PRECIPITATION; SELECT RAIN?; COMBINE 5 OR 6
            5  3271 PRECIPITATION
            6  1547 RAIN?
            7  3615  5 OR 6
? SELECT SCANDINAVIA/DE
            8  2762 SCANDINAVIA/DE

? COMBINE 4 AND 7 AND 8
            9    36  4 AND 7 AND 8
? TYPE 9/6/1-3
1
100670
  Acidification Experiments in Forests. 2. Lysimetric Studies

2
100105
  Field  Experiments with Simulated Acid Rain in Forest Ecosystems. I.
Soil and Vegetation Characteristics, Experimental Design and Equipment

3
082600
  REGIONAL  SURVEY OF LAKES IN SOUTHERN NORWAY, FALL 1974. PRELIMINARY
ANALYSIS OF WATER-CHEMISTRY DATA.

? PRINT 9/5
Printed9/5/1-36
? LOGOFF
          10aug77 11:48:33 User316
  $2.21  0.063 Hrs File45 8 Descriptors
  $3.60  36 Prints
  $5.81  Estimated Total Cost
LOGOFF 11:48:42
```

BIOSIS PREVIEWS

Scope:

BIOSIS PREVIEWS contains citations from both Biological Abstracts (BA) and Bioresearch Index (BioI), the major publications of BioSciences Information Service of Biological Abstracts. Together, these publications constitute the major English-language service providing comprehensive worldwide coverage of research in the life sciences. Biological Abstracts includes approximately 140,000 accounts of original research yearly from nearly 8,000 primary journal and monograph titles. Bioresearch Index includes an additional 100,000 citations a year, from symposia, reviews, preliminary reports, semi-popular journals, selected institutional and government reports, research communications, and other secondary sources. All life sciences subjects are covered including, but not limited to, the following:

- Aerospace Biology
- Agriculture
- Anatomy
- Bacteriology
- Behavioral Sciences
- Biochemistry
- Bioengineering
- Biophysics
- Botany
- Cell Biology
- Environmental Biology
- Experimental Medicine
- Genetics
- Immunology
- Microbiology
- Nutrition
- Parasitology
- Pathology
- Pharmacology
- Physiology
- Public Health
- Radiation Biology
- Systematic Biology
- Toxicology
- Veterinary Science
- Virology
- Zoology

Access:

BIOSIS PREVIEWS is available in hard copy from BioSciences Information Service in Philadelphia or online from the DIALOG and ORBIT Information Retrieval Systems. For further information about these systems, consult Appendix A.

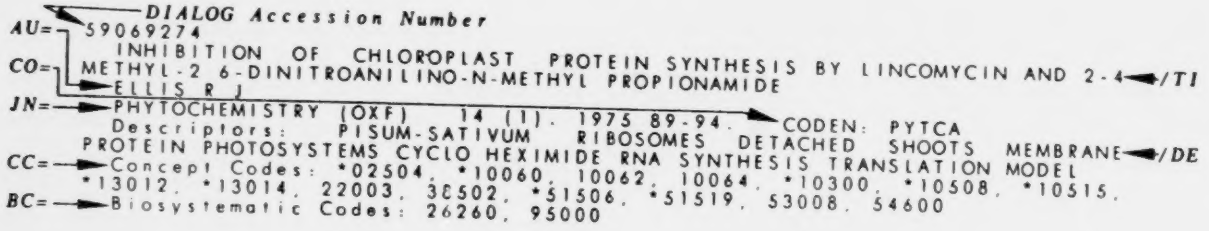
Cost:

The cost of conducting a BIOSIS PREVIEWS search is $45 per connect hour and $0.10 per citation.

Sample Search/Output:

```
? BEGIN 5
          18may77 15:35:08 User316
  $0.13   0.005 Hrs File1
          File05:BIOSIS PREVIEWS 72-77/APR
          Set Items Description (+=OR;*=AND;-=NOT)
          --- ----- ----------------------------
? SELECT DNA
            1 29171 DNA
? SELECT CC=06506
            2 44345 CC=06506   RADIATION BIOL-RADTN
? SELECT BN=EUBACTERIALES
            3 69503 BN=EUBACTERIALES   BC=07200
? COMBINE 1-3/AND
            4  1094  1-3/AND
? TYPE 4/2/1-2
1
63056741
  JOINT  MOLECULES  OF  PHAGE LAMBDA DNA AS AN INTERMEDIATE OF GENETIC
RECOMBINATION
  TAKAHASHI S
  MOL & GEN GENET    150 (1). 1977 43-52.    Coden: MGGEA
  Descriptors: ESCHERICHIA-COLI
  Concept  Codes:  06506,  10010, 10052, *10062, *10300, 10506, 10604,
*13014, *31000, *31500, 32000, *33504
  Biosystematic Codes: 03600, 07200

2
63056730
  SINGLE  STRAND  BREAKS  IN  THE  DNA OF THE UVRA AND UVRB STRAINS OF
ESCHERICHIA-COLI K-12 AFTER UV IRRADIATION
  YOUNGS D A; SMITH K C
  PHOTOCHEM  PHOTOBIOL    24  (6).  1976 (RECD 1977) 533-541.   Coden:
PHCBA
  Descriptors: POLY NUCLEOTIDE LIGASE DNA POLYMERASE 1 EXCISION REPAIR
  Concept  Codes:  06504, *06506, 10052, *10062, 10064, *10300, 10506,
10604,  10614,  10804,  *10808, *13012, *13014, 23001, *31000, *31500,
32000
  Biosystematic Codes: 07200
? PRINT 4
Printed4/2/1-50; 1044 more
? LOGOFF
          18may77 15:38:06 User316
  $2.25   0.050 Hrs File5 3 Descriptors
  $5.00   50 Prints
  $7.25   Estimated Total Cost
LOGOFF 15:38:13
```



```
                DIALOG Accession Number
AU=      59069274
           INHIBITION  OF  CHLOROPLAST  PROTEIN SYNTHESIS BY LINCOMYCIN AND 2-4  /TI
CO=      METHYL-2 6-DINITROANILINO-N-METHYL PROPIONAMIDE
           ELLIS R J
JN=        PHYTOCHEMISTRY (OXF)   14 (1). 1975 89-94.   CODEN: PYTCA
           Descriptors:   PISUM-SATIVUM   RIBOSOMES  DETACHED  SHOOTS  MEMBRANE  /DE
         PROTEIN PHOTOSYSTEMS CYCLO HEXIMIDE RNA SYNTHESIS TRANSLATION MODEL
CC=        Concept Codes: *02504, *10060, 10062, 10064, *10300, *10508, *10515,
         *13012, *13014, 22003, 38502, *51506, *51519, 53008, 54600
BC=        Biosystematic Codes: 26260, 95000
```

CAB ABSTRACTS

Scope:

CAB ABSTRACTS is a comprehensive file of agricultural information containing all records in the 31 journals published by the Commonwealth Agricultural Bureaux (CAB). CAB has long been recognized as a leading scientific information service in agriculture and certain fields of applied biology. Sixteen abstracting units contribute to CAB ABSTRACTS. Each unit, located adjacent to a leading research organization in the United Kingdom and staffed by scientists, specializes in a particular aspect of agriculture, and selects and prepares material to be published in the journals for which it is responsible. Over 8,500 serial journals in 37 languages are scanned, as well as books, reports, and other publications. In some instances, less accessible literature is abstracted by scientists working in other countries. About 150,000 items are selected for publication yearly; significant papers are abstracted, while less important works are reported with bibliographic details only.

CAB ABSTRACTS covers every branch of the agricultural sciences, including cooperatives, economics, education, engineering, genetics, pest control, rural planning, and taxonomy.

Access:

A search on CAB ABSTRACTS can be conducted on the DIALOG information retrieval system. For further information about the DIALOG system, consult Appendix A.

Cost:

The cost of conducting a CAB ABSTRACTS search is $35 per connect hour and $0.25 for each online record printed.

Sample Search/Output:

```
? BEGIN 50
         8apr80 20:17:35 User3476
  $0.18  0.005 Hrs File50
File50:CAB ABS 72-79/DEC
         Set Items Description (+=OR;*=AND;-=NOT)
         --- ----- ------------------------------
? SELECT LACTOSE OR MILK
                4636 LACTOSE
               55649 MILK
           1  57394  LACTOSE OR MILK
? SELECT INTOLERAN? OR TOLERAN?
                1232 INTOLERAN?
               13299 TOLERAN?
           2  14057  INTOLERAN? OR TOLERAN?
? COMBINE 1 AND 2
           3   1118  1 AND 2
```

Sample Search/Output (continued):

```
? SELECT S3 AND PD=1978:PD=1980
              128965 PD=1978:PD=1980
           4   191  S3 AND PD=1978:PD=1980
? TYPE 4/6/1-3
4/6/1
 1078232   U0049-08813
  Human nutrition.

4/6/2
 1077993   U0049-08574
  Lactose intolerance associated with cataracts.

4/6/3
 1077992   U0049-08573
  Recurrent  abdominal  pain  (RAP)   of childhood due to lactose
intolerance: a prospective study.
  (Abstract).

? PRINT 4/7/1-100
Printed4/7/1-100
? LOGOFF
         8apr80 20:19:43 User3476
  $1.30  0.037 Hrs File50 5 Descriptors
  $0.30  3 Types
 $18.75  100 Prints
 $20.35  Estimated Total Cost

LOGOFF 20:19:51
```

CANCERLIT

Scope:

Cancer Literature (CANCERLIT), formerly called CANCERLINE, is sponsored by the National Institute of Health's (NIH) National Cancer Institute (NCI), and contains more than 187,000 references dealing with various aspects of cancer. All references have English abstracts. Over 3,000 U.S. and foreign journals, as well as selected monographs, meeting papers, reports, and dissertations are abstracted for inclusion in CANCERLIT.

Access:

Access to CANCERLIT is available through the Medical Literature Analysis and Retrieval System (MEDLARS) of the National Library of Medicine (NLM) using Medical Subject Headings (MeSH) for biological/medical terms and Chemical Abstracts Service (CAS) numbers at one of the NLM Regional Libraries.

Cost:

CANCERLIT searches cost $15 per hour and $0.15 per page printed offline. At some NLM locations searches are free, particularly for non-profit institutions.

Sample Search/Output:

Not available.

CBDS

Scope:

The Carcinogenesis Bioassay Data System (CBDS) has been developed to manage information about both animals and chemicals involved in carcinogenic investigations. The system includes the collection, maintenance, and reporting of bioassay data for the Etiology Program and Data Analysis Unit of the National Cancer Institute. Contractors and government laboratories conducting NCI-sponsored carcinogenic investigations periodically submit administrative and test results data for entry into the CBDS.

Data Files:

File No.	Name	Coverage
1.	Chemical File	Information about a chemical of interest and the carcinogenesis bioassay program.
2.	Chemical List File	A list of numbers assigned to each bioassay.
3.	Animal Group File	Gives species, strain, sex, role, size of group, preparations administered to the group, treatment regimen, and current status of the group.
4.	Preparation/ Chemical/Tumor File	A listing of chemicals with chemical name, CAS number, and SNOP codes.
5.	Link File	Lists contracts using a specified chemical agent, colony and group number of test, vehicle, positive, and contracted group in an experiment.
6.	Support File	Contains environment and individual animal records.

Access:

Mode of access is via telephone call to Mary Limbart or Robert L. Martin of the National Institute of Health, Bethesda, MD.

Cost:

There is usually no charge for individual requests.

Sample Search/Output:

Not available.

CDA

Scope:

Comprehensive Dissertation Abstracts (CDA) is a definitive subject, title, and author guide to virtually every American dissertation accepted at an accredited institution since 1861, when academic doctoral degrees were first granted in the United States. Approximately 99 percent of all American dissertations are cited in this file. In addition, it serves to disseminate citations for thousands of Canadian dissertations and an increasing number of papers accepted in institutions abroad. Professional (e.g., M.D., L.L.D.) and honorary degrees are not included.

All subject areas are covered, including the following:

- Mathematics and Statistics
- Fine Arts and Music
- Library and Information Science
- Psychology and Sociology
- Business and Economics
- Geography and Regional Planning
- Chemistry
- Health Sciences
- Engineering
- History and Political Science
- Language and Literature
- Philosophy and Religion
- Agriculture
- Astronomy
- Biological and Environmental Sciences
- Geology
- Physics
- Education

Access:

Comprehensive Dissertation Abstracts is available through the DIALOG and ORBIT information retrieval systems. For information about how to access DIALOG and ORBIT, consult Appendix A.

Cost:

The cost of conducting a search on Comprehensive Dissertation Abstracts is $55 per connect hour and $0.12 per citation.

Sample Search/Output:

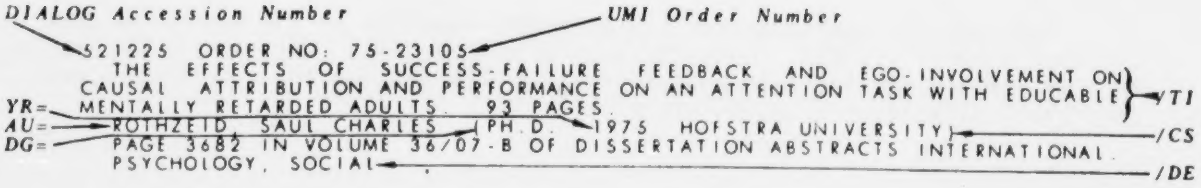
```
? BEGIN  35
         11jul77 8:42:02 User 316
  $0.10  0.004 Hrs File1
         File35:COMP DISSERT ABS 1861 - 1977/JUNE
         Set Items Description (+=OR; *=AND; -=NOT)
         ----------------------------------------
```

Sample Search/Output:

```
? SELECT WAVE; SELECT WAVES
            1   1711 WAVE
            2   1592 WAVES
? SELECT OCEANOGRAPHY/DE
            3    891 OCEANOGRAPHY/DE
? SELECT YR=1973:YR=1977
            4130681 YR=1973:YR=1977
? COMBINE (1 OR 2) AND 3 AND 4
            5     28  (1 OR 2) AND 3 AND 4
? TYPE 5/6/1-2
1
570283  ORDER NO: 77-15364
  STEREOPHOTOGRAMMETRIC   RECONNAISSANCE   OF   OCEAN   WAVE/SEA   ICE
INTERACTION.  172 PAGES.

2
551822  ORDER NO: 76-28500
  APPLICATION  OF  A  "RADIATION-TYPE"  BOUNDARY CONDITION TO THE WAVE
POROUS BED PROBLEM.  101 PAGES.

? PRINT 5/2/1-28
Printed5/2/1-28
? LOGOFF
           11jul77 8:45:18 User316
  $3.03  0.055 Hrs File35 8 Descriptors
  $3.36  28 Prints
  $6.39  Estimated Total Cost
LOGOFF  8:45:25
```



```
521225  ORDER NO: 75-23105
   THE  EFFECTS  OF  SUCCESS-FAILURE  FEEDBACK  AND  EGO-INVOLVEMENT ON
 CAUSAL  ATTRIBUTION AND PERFORMANCE ON AN ATTENTION TASK WITH EDUCABLE
 MENTALLY RETARDED ADULTS.  93 PAGES.
   ROTHZEID, SAUL CHARLES  (PH.D.  1975  HOFSTRA UNIVERSITY)
   PAGE 3682 IN VOLUME 36/07-B OF DISSERTATION ABSTRACTS INTERNATIONAL.
   PSYCHOLOGY, SOCIAL
```

DIALOG Accession Number
UMI Order Number
YR=
AU=
DG=
/TI
/CS
/DE

CEH

Scope:

The Chemical Economics Handbook (CEH) is a multi-volume loose-leaf book concerned with the economic status and progress of the world's chemical industries. Participants (subscribers) are kept informed regarding the present and future status of raw materials, primary and intermediate chemicals, chemical product groups, the chemical industry, and those aspects of other industries and the total economy that are relevant to the chemical industry. Emphasis is placed on future markets, both in terms of quantities and economies of chemicals produced/consumed and the technological requirements of future demand.

Sections of the CEH are: Introduction; Index; Economic Indicators; Manual of Current Indicators; Industry; Chemicals. The main body of CEH is made up of Reports and Data Sheets concerning individual chemicals or groups of chemicals. Data Sheets are summaries including data on chemical production, sales, consumption, price, manufacturing processes, producing companies, plant locations, plant capacities, imports, exports, and sources used. Yearly growth rates can be extrapolated and compared using the standardized graphs and a special protractor, included with each CEH set.

Reports contain detailed analytical sections on topics covered by Data Sheets. CEH Reports are written by subject specialists and reviewed by collaborating experts in the chemical industry, market researchers, or product managers.

A "Manual of Current Indicators" section reporting recent economic statistics is updated and reissued every other month.

CEH contains chemical industry economic indicators such as product growth curves, production quantities, inventory data, price, and export/import ratios. Plant locations, capacities and other data are gathered and updated occasionally. Specialized volumes deal with specific industries such as pesticides.

Access:

CEH is available from SRI International, Memlo Park, CA.

Cost:

Hard copy is available for $7,500-9,000 depending on the number of specialized volumes desired. Computer tape with data listed therein are available. Monthly indexes for the main body of the handbook and for the specialized volumes are available at a subscription cost.

Sample Search/Output

Not applicable.

CFCP

Scope:

The Chemical Formulations of Consumer Products (CFCP) database contains formulation (ingredients with percentage) information for over 15,000 U.S. consumer products.

Data were collected directly from over 1600 manufacturers required to report ingredients to a specificity 0.1%. Approximately 45% of the product formulations were designated by the manufacturers as proprietary data or trade secrets.

Data Files:

The database consists of four files: A Manufacturer-Product file containing manufacturer names, codes, and addresses; a Product-Ingredient file containing product names, codes, and formulation data; a Chemical Dictionary file which is a name authority file relating Chemical Abstracts Service Registry Numbers and nomenclature to trade names and other chemical names reported by manufacturers; and a Bookkeeping file containing file status and management data.

Access:

The file is accessible through the staff of the Consumer Product Safety Commission, Bethesda, MD.

Cost:

Searches are free, as are some publications. Extensive searches may involve some cost.

Sample Search/Output:

Not available.

CHEMICAL ABSTRACTS

Scope:

The databases which contain condensed complete versions or part of the Chemical Abstracts files are ORBIT's CHEM 7071, CAS7276, and CAS77, and DIALOG's CA CONDENSATES/CASIA. The databases cover the following principal areas:

- Applied Chemistry
- Biochemistry and Biology
- Chemical Engineering
- Chemical Substances
- Class of Substances
- Macromolecular Chemistry
- Organic and Inorganic Chemistry
- Physical and Analytical Chemistry
- Properties and Reactions

Access:

As mentioned above, the Chemical Abstracts files can be accessed using both the ORBIT and DIALOG information retrieval systems. For further information on accessing these systems, consult Appendix A.

Cost:

The cost of conducting a Chemical Abstracts search on ORBIT is $60 and printed on DIALOG it is $70 per connect hour. Citations printed offline are $0.16 on ORBIT and $0.20 on DIALOG.

Sample Search/Output:

```
1
CA08624178034C
  Layer-lattice silicates:  a support for a rhodium(1)-triphenylphosphine
homogeneous hydrogenation catalyst
  Author:  Hoffman, James Francis
  Location:  Michigan State University, East Lansing, Michigan.
  Section;  CA067001, CA023XXX  Publ Class:  DISS
  Coden:  DABBBA  Publ:  76  Pages:  108 pp.
  Citation:  Diss. Abstr. Int. B 1977, 37(9), 4454
  Avail:  Xerox Univ. Microfilms, Ann Arbor, Mich., Order No. 77-5821
  Identifiers:  hydrogenation catalyst rhodium phenylphosphine, silicate
  support hydrogenation catalyst, hectorite support hydrogenation catalyst
2
CA08622158129J
  Recovery of gaseous hydrogen fluoride stream in alkylation process
  Author:  Mikulicz, Michael Z., Boney, William G., Vora, Bipin V.
  Location:  USA
  Section:  CA051005, CA067XXX, CA060XXX, CA05 9XXX  Publ Class:  PAT
  Journal:  U.S. Coden:  USXXAM  Publ:  770222  Pages 5 pp.
```

Sample Search/Output (continued):

Cont - in-part of U.S. 3,957, 902.
Identifiers: isobutane olefin alkylation catalyst, hydrogenation fluoride catalyst alkylation recovery, waste gas recovery catalyst alkylation, pollution free alkylation isobutane

CHEMLINE

Scope:

CHEMLINE (Chemical Dictionary OnLine) is the National Library of Medicine's (NLM) online, interactive chemical dictionary file created in collaboration with Chemical Abstracts Service (CAS). It provides a means whereby over 550,000 chemical substance names can be searched and retrieved online.

The resource contains CAS Registry Number, molecular formulas, preferred chemical nomenclature, generic and trivial names derived from the CAS Registry Nomenclature File, and a limited number of Wiswesser Line Notations (WLN). In addition, each Registry Number record contains, where applicable, ring information including: number of rings, ring sizes, ring elemental analysis, and component line formulas.

CHEMLINE contains chemical records for substances indexed in other NLM bibliographic files. It may be used as a pre-search tool to verify or expand chemical names or Registry Numbers to enhance the user's search of other NLM databases.

Access:

CHEMLINE is a component of the MEDLARS information retrieval service of the National Library of Medicine, Bethesda, MD. For information about how to access MEDLARS, consult Appendix A.

Cost:

Cost is $15 per hour of computer time plus $0.12 per page for offline printouts.

Sample Search/Output:

```
USER:
FILE CHEMLINE
PROG:
YOU ARE NOW CONNECTED TO THE CHEMLINE FILE.

SS 1 /C?
USER:
DIMETHYL SULFOXIDE  (SY)
PROG:
SS (1) PSTG (1)
```

Sample Search/Output (continued):

```
SS 2 /C?
USER:
PRINT DETAILED INDENTED COMPRESSED
PROG:

1
CAS REGISTRY NO           67-68-5
OTHER CAS REGISTRY NO     8070-53-9 (CAS)
MOLECULAR FORMULA         C2-H6-O-S
CAS TYPE1 NAME            METHYL SULFOXIDE (8CI) ; METHANE.
                          SULFINYLBIS- (9CI)
SYNONYMS                  SQ 9453 ; DMSO ; DROMISOL ; DIMETHYL
                          SULPHOXIDE ; DIMEXIDE ; SULFINYLBISMETHANE ;
                          DIMETHYL SULFOXIDE ; DOLICUR ; DMS 70 ;
                          DMS 90 ; HYADUR ; SOMIPRONT ; INFILTRINA ;
                          DIPIRARTRIL-TROPICO ; DEMSODROX ;
                          DURASORB
MAIN HEADING              DIMETHYL SULFOXIDE
LOCATOR                   TOXLINE ; TOXBACK ; RTECS ; TDB ; MEDLARS
```

CHEMNAME

Scope:

CHEMNAME (Chemical Abstracts Chemical Name Dictionary) contains a listing of chemical substances in a dictionary-type, non-bibliographic file. For each substance listed, the Chemical Abstracts Service (CAS) Registry Number, molecular formula, Chemical Abstracts (CA) Substance Index Name, available synonyms, ring data, and other chemical substance information are listed. The primary purpose of this file is to support specific substance searching and substructure searching.

CHEMNAME presently includes those chemical substances in the CAS Registry System that have been referenced two or more times from 1972 through the last quarterly update, which includes the 9th Collective Index period. Chemical substances cited two or more times in one collective index period will also appear in other collective index periods without change in CAS Registry Number.

Access:

CHEMNAME is available through the DIALOG information retrieval system. For information about how to access DIALOG, consult Appendix A.

Cost:

The cost of conducting a search on CHEMNAME is $70 per connect hour and $0.20 per citation.

Sample Search/Output:

```
? BEGIN 31
         20dec79 12:30:50 User3462
 $0.36  0.006 Hrs File31
File31:CHEMNAME(TM) FILE
(Copr. LMSC Inc.)
627,845 SUBS. JAN72-NOV78
         Set Items Description (+=OR;*=AND;-=NOT)
         --- ----- ------------------------------
? SELECT PLATINUM(C)PYRIDINE
           1   212 PLATINUM(C)PYRIDINE
? SELECT ST=OC
           2  8235 ST=OC
? COMBINE 1 AND 2
           3    28  1 AND 2
```

Sample Search/Output (continued):

```
? TYPE 3/5/1-3
3/5/1
  CAS REGISTRY NUMBER: 65167-32-0
  FORMULA: C16H25BrN2OPt
  ANALYSIS OF RINGS: C5N
  NUMBER OF RINGS: 1
  SIZE OF RINGS: 6
  REPLACED CAS REGISTRY NUMBER(S): 68499-81-0
  CA NAME(1): HP=Platinum (9CI),SB=bromobis(3,5-dimethylpyridine-
)hydroxydimethyl-,ST=(OC-6-24)-
  CA NAME(2):
  HP=Pyridine (9CI),SB=3,5-dimethyl-,NM=platinum complex

3/5/2
  CAS REGISTRY NUMBER: 64592-24-1
  FORMULA: C25H25IN2Pt
  ANALYSIS OF RINGS: C6
  NUMBER OF RINGS: 1
  SIZE OF RINGS: 6
  CA NAME(1): HP=Platinum (9CI),SB=(2,2'-bipyridine-N,N')iodomet-
hylbis(4-methylphenyl)-,ST=(OC-6-43)-
  CA NAME(2):

3/5/3
  CAS REGISTRY NUMBER: 63469-62-5
  FORMULA: C19H20Cl2N2Pt
  ANALYSIS OF RINGS: C5N C6
  NUMBER OF RINGS: 1 1 2
  SIZE OF RINGS: 6 6
  CA NAME(1): HP=Platinum (9CI),SB=dichloro(1-phenyl-1,3-propane-
diyl)bis(pyridine)-,ST=(OC--
  CA NAME(2):

? PRINT 3/5/1-28
Printed3/5/1-28
```

```
        RN= → CAS REGISTRY NUMBER: 146-28-1
    EC=,MF= → FORMULA: C23H28ClN3O2S.2ClH ←──────────────────────── /EC
        AR= → ANALYSIS OF RINGS: C4N2 C4NS-C6-C6
        NR= → NUMBER OF RINGS: 1 3 4
        SR= → SIZE OF RINGS: 6 6,6,6
        FR= → FORMULA OF RINGS: NC2NC2 NC2SC2
    ON=,RD= → REPLACED CAS REGISTRY NUMBER(S): 10332-19-1
HP=,SB=,NM= → CA NAME(1): HP=1-Piperazineethanol (8CI),SB=4-(3-(2-chlorophenothia-} ← /DE
              zin-10-yl)propyl)-,NM=acetate (ester), dihydrochloride            }
        SY= → SYNONYMS:   Dartal  dihydrochloride;Thiopropazate  dihydrochloride;} ← /ID
              Thiopropazate hydrochloride                                        }
HP=,SB=,NM= → CA NAME(2): HP=1-Piperazineethanol (9CI),SB=4-(3-(2-chloro-10H-phen-} ← /DE
              othiazin-10-yl)propyl)-,NM=acetate (ester), dihydrochloride        }
```

CHEMTREC

Scope:

CHEMTREC (the Chemical Transportation Emergency Center) is an information center which provides immediate hazard warnings and guidance to those on the scene of a chemical transportation accident or emergency. Available by telephone 24 hours a day, CHEMTREC may be used by any carrier, shipper, emergency service, or other persons encountering a transport-related chemical spill, leak, fire, release, exposure, or accident. Persons who notice or suspect a leak, spill, or potential problem concerning chemicals in transport should contact CHEMTREC for assistance in preventing or remedying an emergency.

CHEMTREC will attempt to ascertain the name(s) of the product, nature of the problem, location, shipper, manufacturer, container type, rail car or truck number, carrier name, consignee, and local conditions (weather, population density) from the individual who contacts the center.

CHEMTREC maintains extensive files for the identification of trade names, chemical names, shippers, and carriers. Using these files, CHEMTREC personnel provide the caller with indications of the hazards involved and give specific instructions for handling the emergency. CHEMTREC personnel then contact the shipper and relay the particulars of the emergency, thus passing responsibility for further guidance to the shipper. In some cases, manufacturers, government agencies, police, or emergency services will be contacted directly.

The file contains 3,100 chemical dossiers searchable under 15,000 trade names. It provides 900 personal contact names for expert consultation regarding the chemical. The database is a manual card file.

Access:

Access is obtained by a telephone call to the Chemical Manufacturers Association (800-424-9300).

Cost:

Service is free.

Sample Search/Output:

Not applicable.

CICIS

Scope:

The Chemicals in Commerce Information System (CICIS) is an online interactive management information system for the Office of Toxic Substances, Environmental Protection Agency (EPA). Its purpose is to store and enable utilization of information and data collected under the mandates of the Toxic Substances Control Act (TSCA). Much of CICIS' content is proprietary, but it is anticipated that a portion of the file with non-proprietary data will be made publicly available.

CICIS is being developed in modular stages. The first available and core module is the TSCA Inventory, containing chemical identification and production data submitted to EPA in 1978 by chemical manufacturers and importers as required under TSCA. Additional modules are to contain information on usage, health and safety studies, exposure, environmental effects, test results, production updates, disposal methods, and byproducts and impurities, in support of risk assessment of specific chemicals or groups of chemicals, or monitoring, environmental, planning and management, and other activities that assess the extent of the environmental program in certain localities or media. Most of these data will be submitted by chemical manufacturers as required under TSCA.

Data Files:

Among the subsystems planned for the completed CISIS are:

- Chemical Inventory System: for management of industry-reported data on chemical substances currently manufactured, processed, or imported into the U.S.; also contains data on manufacturers, processors, and importers.
- Premanufacture Submissions Module: allows users to display selected portions of data submitted in premanufacture notices.
- Chemical Information Database: includes data in the current Inventory, plus additional data from submissions.
- Organization/Site Database: will contain data specific to all industry submitters of data.
- Health and Safety Subsystem: will keep track of health and safety studies submitted for risk assessment activities. Some data from the studies may also be stored in this database.
- Test Results Subsystems: stores test result data received under TSCA and from other sources. Results will be linked to chemicals, documents and other data in the database.

Access:

The system is currently accessible by application to the U.S. EPA Office of Toxic Substances in Washington, D.C. (202-755-9336). Access to confidential information must be preceeded by EPA clearance. Ultimate access will be made available through CSIN. (See Section III of this handbook.)

Cost:

Not available.

Sample Search/Output:

Not available.

CIN

Scope:

CHEMICAL INDUSTRY NOTES (CIN) corresponds to the weekly printed Chemical Industry Notes and is made available on the DIALOG and ORBIT systems as one of the Predicasts group of databases. CIN extracts articles from over 80 worldwide business-oriented periodicals of interest to the chemical industry.

CIN extracts are organized into eight general categories:

- Production
- Pricing
- Sales
- Facilities
- Products and Processes
- Corporate Activities
- Government Activities
- People

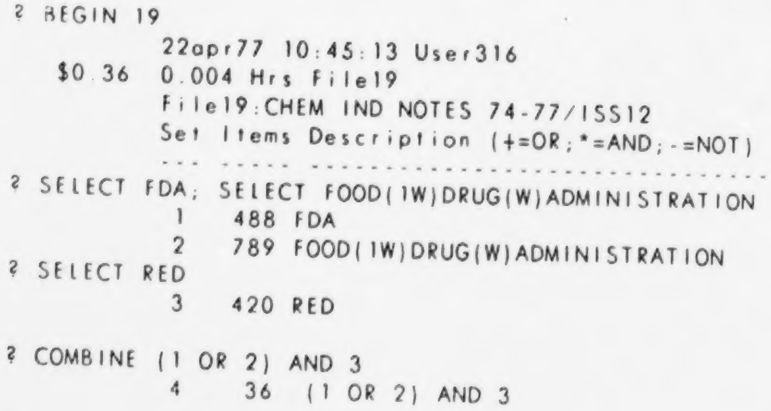
Access:

CHEMICAL INDUSTRY NOTES is available through the DIALOG and ORBIT information retrieval systems. For information about how to access DIALOG and ORBIT, consult Appendix A.

Cost:

The cost of conducting a search on CHEMICAL INDUSTRY NOTES is $60 per connect hour and $0.20 per citation.

Sample Search/Output:



```
? BEGIN 19
            22apr77 10:45:13 User316
     $0.36  0.004 Hrs File19
            File19:CHEM IND NOTES 74-77/ISS12
            Set Items Description (+=OR;*=AND;-=NOT)
            --- ----- --------------------------------
? SELECT FDA; SELECT FOOD(1W)DRUG(W)ADMINISTRATION
              1   488 FDA
              2   789 FOOD(1W)DRUG(W)ADMINISTRATION
? SELECT RED
              3   420 RED

? COMBINE (1 OR 2) AND 3
              4     36  (1 OR 2) AND 3
```

Sample Search/Output (continued):

```
? TYPE 4/2/1-3
 1
 666247  Wall St. J., East. Ed.  77/02/01  P33
   *coloring material development
   US Food & Drug Administration
   vegetable coloring material
   3    PRODUCTS AND PROCESSES
 2
 662244  Fed. Regist.  76/12/28  P56306-7
   *US FDA color additive regulation
   US Food & Drug Administration
   FD&C color additive regulation US FDA
   9    GOVERNMENT ACTIVITIES
 3
 660317  J. Commer.  76/12/17  P5
   *US FDA food dye study
   red dye study US FDA
   US Food & Drug Administration
   9    GOVERNMENT ACTIVITIES
? PRINT 4/5/1-36
Printed4/5/1-36
? LOGOFF
          22apr77 10:47:14 User316
   $3.06  0.034 Hrs File19 5 Descriptors
   $7.20  36 Prints
   $10.26 Estimated Total Cost
 LOGOFF 10:47:20
```

CLAIMS/CHEM

Scope:

The CLAIMS/CHEM database contains over 400,000 U.S. chemical and chemically related patents issued since 1950. Foreign equivalents from Belgium, France, Great Britain, West Germany, and The Netherlands are included to the extent of approximately 20% of the patents in the file. Over 60% of the records include Chemical Abstracts Registry numbers.

All patents in the Chemical section of the Official Gazette of the U.S. Patent Office together with any patents in the General, Electrical and Mechanical sections of the Gazette which are considered to be chemically oriented are included in the file.

Access:

CLAIMS/CHEM is available through the DIALOG information retrieval system. For information about how to access DIALOG, consult Appendix A.

Cost:

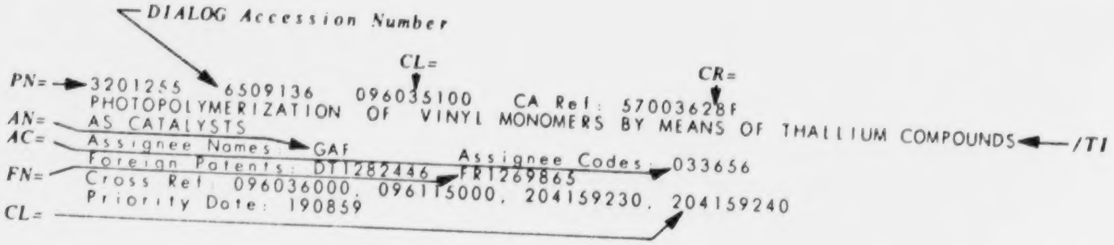
The cost of conducting a search on CLAIMS/CHEM is $95 per connect hour and $0.15 per citation.

Sample Search/Output:

```
? BEGIN 23
          26may77 13:08:08 User316
  $0.10   0.004 Hrs File1
          File23:CLAIMS/CHEM 50-76/DEC
          Set Items Description (+=OR;*=AND;-=NOT)
          --- ----- ---------------------------
? SELECT CL=260301000/OR; SELECT CL=426548000/OR; SELECT SACCHARIN?
            1     59 CL=260301000/OR
            2    101 CL=426548000/OR
            3     28 SACCHARIN?
? SELECT CYCLAMAT?; SELECT SUGAR(F)SUBSTITUTE; COMBINE 1-5/OR
            4      4 CYCLAMAT?
            5      5 SUGAR(F)SUBSTITUTE
            6    177  1-5/OR
? SELECT SWEETEN?
            7    313 SWEETEN?
? SELECT ARTIFICIAL; SELECT NONNUTRITIVE; SELECT NON(W)NUTRITIVE
            8    556 ARTIFICIAL
            9      1 NONNUTRITIVE
           10      3 NON(W)NUTRITIVE
? SELECT CALORIE(W)FREE; SELECT AGENT; SELECT AGENTS; COMBINE 8-13/OR
           11      3 CALORIE(W)FREE
           12   2383 AGENT
           13   4578 AGENTS
           14   7506  8-13/OR
```

Sample Search/Output (continued):

```
? COMBINE 6 OR (7 AND 14)
            15    219  6 OR (7 AND 14)
? LIMIT 15/C
            16     73  15/C
? TYPE 16/2/1-3
1
3982023    7619141    426003000
C/      CHEWING     GUMS     OF     LONGER     LASTING     SWEETNESS     AND
FLAVOR/L-ASPARTYL-L-PHENYLALANINE, ARTIFICIAL SWEETNER/
Assignee Names: GEN FOOD    Assignee Codes: 033888
Cross Ref: 426548000
2
3979401    7618180    260301000
C/    POLYFUNCTIONAL  ALIPHATIC  AND  CYCLOALIPHATIC  CYCLIC  NITRILE
SULFITES AND CARBONATES/INTERMEDIATES FOR POLYISOCYANATES/
Assignee Names: ATLANTIC   Assignee Codes: 006096
Cross Ref: 260240000, 260240100, 260307000, 260453000
3
3978034    7617647    260112500
C/   L-ASPARTYL DIPEPTIDES AS SWEETENING AGENTS
Assignee Names: SQUIBB   Assignee Codes: 079248
Cross Ref: 426548000
? PRINT 16/2/1-73
Printed16/2/1-73
? LOGOFF
           26may77 13:15:40 User316
 $18.90    0.126 Hrs File23 15 Descriptors
  $7.30    73 Prints
 $26.20    Estimated Total Cost
LOGOFF 13:15:47
```



```
3201255   6509136    096035100   CA Ref: 57003628F
PHOTOPOLYMERIZATION  OF  VINYL MONOMERS BY MEANS OF THALLIUM COMPOUNDS
AS CATALYSTS
Assignee Names: GAF            Assignee Codes: 033656
Foreign Patents: DT1282446, FR1269865
Cross Ref: 096036000, 096115000, 204159230, 204159240
Priority Date: 190859
```

DIALOG Accession Number
CL=
CR=
PN=
AN=
AC=
FN=
CL=
/TI

CLAIMS/CLASS

Scope:

The CLAIMS/CLASS file is a dictionary index to the U.S. Patent Office's classification codes. This database enables the searcher to identify classes and subclasses appropriate to more comprehensive searching of the CLAIMS/CHEM file. Conversely, the searcher may also use the CLAIMS/CLASS file to look up the title of a class and/or subclass observed on a record retrieved in the CLAIMS/CHEM file.

The 312 class titles cover all types of patents that have been issued for mechanical, electrical, and chemical inventions. The 14,561 subclass titles have been included for the 47 classes which are primarily chemical classes and have been used to classify the patents in the CLAIMS/CHEM files.

Access:

CLAIMS/CLASS is available through the DIALOG information retrieval system. For information about how to access DIALOG, consult Appendix A. Related printed material is available from:

IFI-Plenum Data Company
2001 Jefferson Davis Highway
Arlington, VA 22202

Cost:

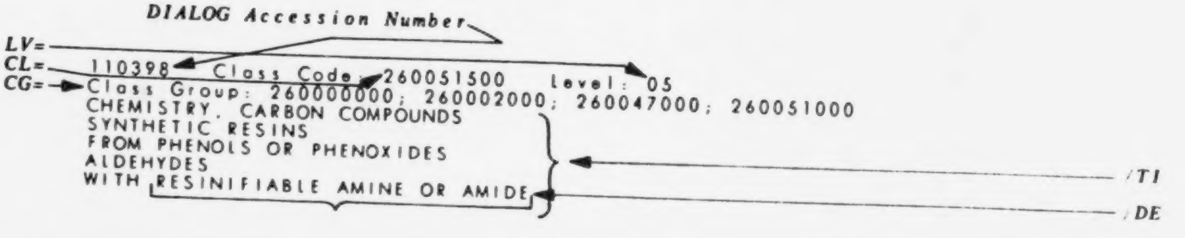
The cost of conducting a search on CLAIMS/CLASS is $95 per connect hour and $0.50 per citation.

Sample Search/Output:

```
? BEGIN 25
          31may77 7:59:42 User316
  $0.18   0.002 Hrs File25
          File25:CLAIMS/CLASS JAN77
          Set Items Description (+=OR;*=AND;-=NOT)
          --- ----- --------------------------------
? SELECT SLOW(W)RELEASE(C)NITROGEN
            1      0 SLOW (W)RELEASE(C)NITROGEN
? SELECT FERTILIZER?
            2    131 FERTILIZER?
? SELECT UREA/DE
            3     15 UREA/DE
? COMBINE 2 AND 3
            4      3  2 AND 3
```

Sample Search/Output (continued):

```
? TYPE 4/5
1
 103490   Class Code: 071120000   Level: 07
 Class  Group: 071000000; 071001000; 071065000; 071079000; 071118000;
071119000
 CHEMISTRY, FERTILIZERS
 PROCESSES AND PRODUCTS
 PLANT GROWTH REGULATING COMPOSITIONS
 ORGANIC ACTIVE COMPOUND CONTAINING
 AMIDE
 UREA
 N-ARYL-UREA
? TYPE 4/2/2-3
2
 103489   Class Code: 071119000   Level: 06
 Class Group: 071000000; 071001000; 071065000; 071079000; 071118000
 UREA
3
 103398   Class Code: 071028000   Level: 05
 Class Group: 071000000; 071001000; 071011000; 071027000
 UREA AND ITS DERIVATIVES
? TYPE 4/5/3
3
 103398   Class Code: 071028000   Level: 05
 Class Group: 071000000; 071001000; 071011000; 071027000
 CHEMISTRY, FERTILIZERS
 PROCESSES AND PRODUCTS
 ORGANIC MATERIAL CONTAINING
 FROM SYNTHETIC MATERIAL
 UREA AND ITS DERIVATIVES
? SELECT CG=071120000; SELECT CG=071028000
           5      1 CG=071120000
           6      3 CG=071028000
? TYPE 6/6/1-2
1
 103400   Class Code: 071030000   Level: 06
 NITROGEN CONTAINING SUBSTANCES
2
 103399   Class Code: 071029000   Level: 06
 PHOSPHORUS CONTAINING SUBSTANCES
```



```
 110398   Class Code: 260051500   Level: 05
 Class Group: 260000000; 260002000; 260047000; 260051000
 CHEMISTRY, CARBON COMPOUNDS
 SYNTHETIC RESINS
 FROM PHENOLS OR PHENOXIDES
 ALDEHYDES
 WITH RESINIFIABLE AMINE OR AMIDE
```

CNMR

Scope:

The Carbon-13 Nuclear Magnetic Resonance Spectral Search System (CNMR) is an online, interactive database containing C-13 NMR spectra for over 6,000 chemical substances. Spectral data (as chemical shifts), Chemical Abstract Service (CAS) Registry numbers, CNMR accession numbers, and partial and complete molecular formulas are searchable. Printed/displayed output provides structural diagrams, CAS name, CAS Registry number, molecular weight, molecular formula, bibliographic citation to source of spectrum, solvent used, and chemical shifts parameters. Several search programs are available in the CNMR system. The user selects the program(s) best suited to the search criteria and the desired results.

Access:

CNMR is available through the Chemical Information System (CIS). For information about how to access CIS, consult Appendix A.

Cost:

The cost of using CNMR is $36 per connect hour. In addition to the search costs, there is an annual $300 subscription fee, which is used to defray storage costs.

Sample Search/Output:

```
Option? SPEC

CAS RN: 34281453
                                    O     CL
                                    +    *
                                    +   *
   C21C19            C14C11         C5*C8
  .    .            .    .         *   +
 .      .          .      .       *    +
C22      C17***O**C15      C6****N     +
 .      .          .      .       *    +
  .    .            .    .         *   +
   C20C18            C13C10         C2*C4
                                    +   *
                                    +    *
                                    O     CL
```

Sample Search/Output (continued):

```
     1H-Pyrrole-2,5-dione, 3,4-dichloro-1-(4-phenoxyphenyl)-
WLN: T5VNVJ BR DOR++ DG EG
CAS RN = 34281-45-3      CMR#  2635      MW = 333.98
C16 H9 CL2 N1 O3
H.M.RELLES & R.W.SCHLUENZ,J.ORG.CHEM.,37,1742(1972)
Solvent:    UNKNOWN

 SHIFT   MULT   INTENS   ASSIGN
 157.8    D         0     17
 156.8    S         0     15
 130.9    D         0     10
 129.8    D         0     20
 126.6    S         0      6
 124.8    D         0     22
 119.9    D         0     18
 119.3    D         0     13
```

COMPENDEX

Scope:

The COMPENDEX database is the machine-readable version of The Engineering Index, which provides the engineering and information communities with abstracted information from the world's significant engineering and technological literature. COMPENDEX provides worldwide coverage of the journal literature, publications of engineering societies and organizations, papers from the proceedings of conferences, and selected government reports and books.

COMPENDEX is an interdisciplinary index to the world's engineering developments, including the following subject areas:

- Civil, Environmental, Geological and Biological Engineering
- Electrical, Electronics and Control Engineering
- Chemical, Agricultural and Food Engineering
- Mining, Metals and Fuel Engineering
- Mechanical, Automotive, Nuclear and Aerospace Engineering
- Industrial and Management Applications

Access:

COMPENDEX is available through the DIALOG and ORBIT information retrieval systems. For information about how to access DIALOG and ORBIT, consult Appendix A.

Cost:

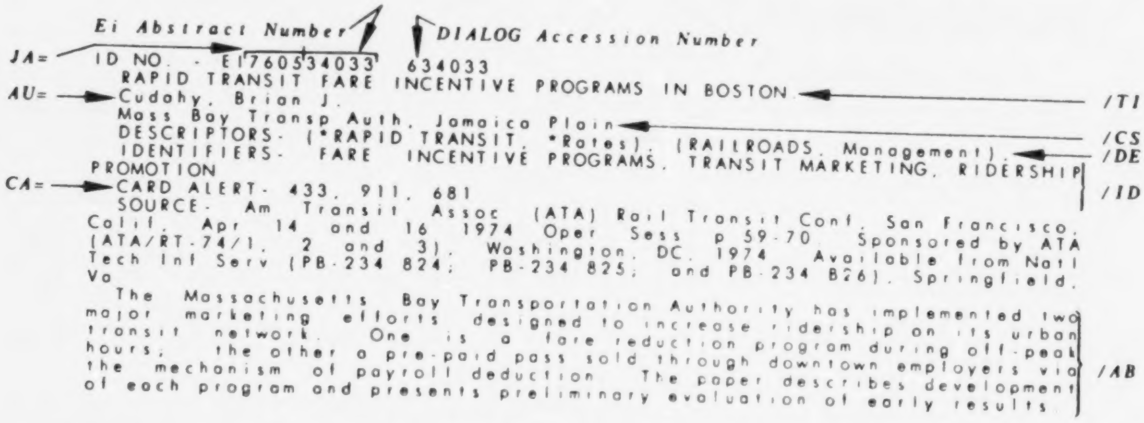
The cost of conducting a search on COMPENDEX is $65 per connect hour and $0.10 per citation.

Sample Search/Output:

```
? BEGIN 8
         25may77 12:30:00 User316
   $0.09 0.002 Hrs File5
         File08:COMPENDEX 70-77/APR
         Set Items Description (+=OR;*=AND;-=NOT)
         --- ----- -----------------------------
? SELECT STEEL?
           1 35237 STEEL?
? SELECT CORROSION
           2 10761 CORROSION
```

Sample Search/Output (continued):

```
? SELECT SULFURIC(W)ACID; SELECT H(W)2SO(W)4; COMBINE 3 OR 4
            3  1167 SULFURIC(W)ACID
            4   525 H(W)2SO(W)4
            5  1581  3 OR 4
? COMBINE 1 AND 2 AND 5
            6   190  1 AND 2 AND 5
? LIMIT 6/500001-799999
            7    75  6/500001-799999
? SELECT LEFT(W)BRACKET/TI
            8 55779 LEFT(W)BRACKET/TI
? COMBINE 7 AND 8
            9    25  7 AND 8
? COMBINE 7 NOT 8
           10    50  7 NOT 8
? TYPE 10/6/1-3
1
ID NO.- EI770428045      728045
  CORROSION  BEHAVIOR  OF STAINLESS STEELS IN SULFURIC ACID CONTAINING
Fe**3** $plus$  AND Cl** $minus$
  SOURCE- Corros Eng (Tokyo)  v 25 n 11 1976 p 665-670
2
ID NO.- EI770320312      720312
  PITTING RESISTANCE OF HIGH Cr-HIGH Ni AUSTENITIC STAINLESS STEELS.
  SOURCE- Trans Iron Steel Inst Jpn  v 16 n 9 1976 p 481-485
3
ID NO.- EI770213473      713473
  EFFECT  OF  CHEMICAL  ADSORPTION  ON THE LOW-CYCLE CORROSION FATIGUE
STRENGTH OF STEEL IN AN ACID MEDIUM.
  SOURCE- Prot Met  v 12 n 2 Mar-Apr 1976 p 169-171
? PRINT 10/5
Printed10/5/1-50
? PRINT 9/5
Printed9/5/1-25
? LOGOFF
          25may77 12:33:42 User316
  $4.03   0.062 Hrs File8 9 Descriptors
  $7.50   75 Prints
 $11.53   Estimated Total Cost
LOGOFF 12:33:48
```


Ei Abstract Number
DIALOG Accession Number
JA=
AU=
CA=
/TI
/CS
/DE
/ID
/AB

```
  ID NO. - EI760534033  634033
    RAPID TRANSIT FARE INCENTIVE PROGRAMS IN BOSTON.
    Cudahy, Brian J.
    Mass Bay Transp Auth, Jamaica Plain
    DESCRIPTORS- (*RAPID TRANSIT, *Rates), (RAILROADS, Management),
    IDENTIFIERS- FARE INCENTIVE PROGRAMS, TRANSIT MARKETING, RIDERSHIP
  PROMOTION
    CARD ALERT- 433, 911, 681
    SOURCE- Am Transit Assoc (ATA) Rail Transit Conf, San Francisco,
  Calif, Apr 14 and 16 1974 Oper Sess p 59-70. Sponsored by ATA
  (ATA/RT-74/1, 2 and 3), Washington, DC, 1974. Available from Natl
  Tech Inf Serv (PB-234 824; PB-234 825; and PB-234 826), Springfield,
  Va
    The Massachusetts Bay Transportation Authority has implemented two
  major marketing efforts designed to increase ridership on its urban
  transit network. One is a fare reduction program during off-peak
  hours; the other a pre-paid pass sold through downtown employers via
  the mechanism of payroll deduction. The paper describes development
  of each program and presents preliminary evaluation of early results.
```

CPD

Scope:

Chemical Plant Data (CPD) is designed to provide worldwide information on chemical plants producing, or planning to produce, any of more than 100 basic chemicals. Currently, 114 chemicals, or in some cases classes of chemicals, are covered. The information available through this service is based upon material collected from a wide range of sources published in many languages, and includes technical literature, company information, annual reports, etc. In addition, companies are approached to verify the information thus provided.

Subject coverage includes:

- 114 chemical commodities
- Producing plant listings (worldwide)
- Plant capacities, start-up date
- Production/Sales/Statistical summaries
- Producer/Process/Feedstock

Access:

Currently, Chemical Plant Data is disseminated primarily in hard copy form. Online computer retrieval of this information is, however, in the planning stages. For further information contact:

The Sales Department
Chemical Data Services
Dorset House, Stamford Street
London, SE1 9LU, ENGLAND

Cost:

Not available.

Sample Search/Output:

Not applicable.

CRECORD

Scope:

CRECORD is a database of the U.S. Congress proceedings. It covers bills and resolutions, as well as their amendments, committee and subcommittee reports, Public Laws, speeches, debates, and floor actions.

Access:

CRECORD is available through the ORBIT information retrieval system. For information about how to access ORBIT, consult Appendix A.

Cost:

The cost of conducting a search on CRECORD is $80 per connect hour and $0.15 per citation.

Sample Search/Output:

```
AN  - 7815-858
TI  - House began consideration of HR 12222, International Development &
      Food Assistance Act; no final action.  H.Res. 1164, rule providing
      for consideration, was agreed to by voice vote H3772.  Stmts
      supporting the rule by BOLLING, J.ANDERSON H3772.  ZABLOCKI
      describes $3.7 billion authorization H3772, citing increases for
      population planning, schools and hospitals, contributions to
      internatl organizations, refugee assistance, and bilateral
      economic assistance to poor countries.  During debate, HOUSE AGREED
      TO FOLLOWING AMENDMENTS:  JEFFORDS H3781 to provide that, where
      feasible, President shall give consideration to using solar energy
      technology in housing development programs.  PEPPER H3801 to pro-
      vide $1 million or 25% of cost for holding World Assembly on Aging.
      BAUMAN H3801 to assure that no support be given to military activi-
      ties of Southwest African People's Organization through UN
      Institute for Namibia.  HOUSE REJECTED THE FOLLOWING AMENDMENTS:
      RYAN H3782 that sought to strike $7.5 million for U.S. contribution
      to UN University Endowment Fund for research and training effort.
      RYAN H3784 that sought to provide that no funds for UN University
      could be used until report to Congress on how money will be spent
      and listing institutions involved with University; a FRASER point
      of order against amendment was overruled.  LOTT H3785 that sought
      to reduce authorization level in Title I back to level approved by
      President, reducing increases for population planning, schools and
      hospitals abroad, and voluntary contributions to internal organiza-
      tions; 183-212 vote H3788.  MCCLOSKEY H3789 that sought to provide
      that no funding be given the Southeast Asia countries without
      fullest accounting for MIA's, POW's, and KIA's; division vote 15-36
      H3794.  HAGEDORN H3794 that sought to provide for termination of
```

Sample Search/Output (continued):

agriculturally related assistance under PL 480 program to countries not found to be making "reasonable progress" towards eliminating domestic disincentives to agricultural production; 141-236 vote H3796. LAGOMARSINO H3797 that sought to encourage Panama to use increased revenue resulting from Panama Canal Treaty for development purposes; 187-187 vote H3800. Pending at adjournment was J. Johnson amendment H3802 striking tobacco and tobacco products from eligibility for use in Food for Peace program H3802. Major stmts supporting passage of HR 12222 by BROOMFIELD & WINN H3774; WHALEN H3775; GILMAN H3776 re Economic Support Fund to assist Middle East peace effort. HAMILTON H3777 citing reforms proposed by late Senator HUMPHREY to improve foreign aid legislation and administration of AID program.

CRGS

Scope:

The Chemical Regulations and Guidelines System (CRGS), currently under development, is a system that will maintain information on the current state of regulations and guidelines as they apply to selected chemicals or chemical classes. Information contained in CRGS will include:

- Federal regulations
- U.S. statutes
- State laws and regulations
- Court decisions
- International and foreign regulations
- Government standards and guidelines
- Current awareness documents

This material will be obtained from a number of sources, possibly including:

- Federal Register
- U.S. Code and Code of Federal Regulations (CFR)
- U.S. Statutes at Large
- Congressional Record
- Various Weekly "Reporters"
- Other Online Systems

Source documents will not be included. Records will be constructed for each citation, and these records will be searchable via at least eleven different access keys including:

- Chemical name
- Chemical Abstracts System (CAS) Registry number
- Date of issue
- Jurisdiction code
- Responsible agency
- Controlled subject terms
- Product/trade name
- Product code
- Document category code
- Regulation status code
- Terms in abstracts

Access:

CRGS will be made available through CSIN (See Section III of this handbook).

Cost:

Not available.

Sample Search/Output:

Not available.

CRR

Scope:

The Chemical Regulation Reporter (CRR) is a set of loose-leaf books which report, index, and cumulate full texts of documents concerning chemical regulations and related activities, excluding foods, drugs, and cosmetics. It is organized into three separate sections, each of which is in its own binder. These sections are: Current Reports, Reference File, and Hazardous Materials Transportation.

The weekly Current Report summarizes current events related to chemical regulation. Articles report matters involving general policy, criteria documents, legislation, litigation, testing, research, recordkeeping, reporting, enforcement, meetings, industry happenings, and other topics. Full texts of proposed regulations, agency statements of policy, grants and denials of exemptions from regulations, and other documents are given. A schedule of meetings and other events in Congress and the Executive Branch is also included.

The Reference File compiles the full texts of Federal laws and regulations concerning chemical substances, and issuances under the Toxic Substances Control Act, Resource Conservation and Recovery Act, OSHA, Clean Air Act, Clean Water Act, Federal Insecticide, Fungicide and Rodenticide Act, and other relevant Federal statutes. It includes filing instructions, testing information, notification information, information on chemicals in air, water, land, and workplaces, manufacturing information, reporting, recordkeeping, administration information, and information on pesticides and radiation.

The Hazardous Materials Transportation section, available as a separate publication, reports current events and compiles laws and regulations, usually from the Department of Transportation, concerning the transportation of hazardous material.

Access:

The Chemical Regulation Reporter is generated, sponsored, and disseminated by the Bureau of National Affairs, Washington, D.C. 20037, (202) 452-4200.

Cost:

The Chemical Regulation Reporter is available on a yearly subscription basis for $367.

Sample Search/Output:

Not applicable.

CRYST

Scope:

The Cambridge Crystallographic Database (CRYST) comprises files of bibliographic, chemical connectivity and numeric structural data, for organics, organometallics and metal complexes studied by X-ray and neutron diffraction. The files, covering the literature from 1935 and maintained on a current basis, presently contain information on some 25,000 structural studies. Certain categories of information, particularly bibliographic, are disseminated in printed form via the Molecular Structures and Dimensions series.

The database currently available under the CRYST component of the Chemical Information System (CIS) has been derived directly from the Cambridge University Crystallographic Data Centre database. Some 17,601 of the compounds in the CRYST database have now undergone registry processing at the Chemical Abstracts Service to create the corresponding (SANSS) database. Of the 17,601 items, some 1,135 were considered to be non-registrable. The remaining 16,466 items resulted in the identification of the 14,860 unique compounds in this SANSS collection. When displaying compounds retrieved from this collection, local identifiers will be cited in terms of the registry number with a two digit sub-identifier suffix. These numbers will serve as the identifiers for the compounds in the CRYST system when the CRYST and SANSS are automatically interfaced in the near future. (See SANSS.)

Access:

CRYST is available through the Chemical Information System (CIS). For information about how to access CIS, consult Appendix A.

Cost:

CRYST searches cost $36 per hour. In addition to the search costs, there is an annual $300 subscription fee, which is used to defray storage costs.

Sample Search/Output:

Not available.

CTCP

Scope:

The Clinical Toxicology of Commercial Products (CTCP) Trade Name Database is an online database containing formulations and related information obtained from manufacturers and marketers for 27,000 commercial products.

Products having information in the database are those most frequently involved in accidental or suicidal poisoning episodes. Included in each product record are product trade names, primary use, usage index terms, manufacturer or marketer-distributer identification, toxicity ratings, product formulations, Chemical Abstracts Service (CAS) Registry number, and file management information. The database is primarily searchable by trade names, manufacturer, ingredient names, CAS Registry numbers, and product use classifications. Output may be in several forms: numerical counts of products (postings); lists, such as trade names for products containing a chemical (ingredient); or full formulation record descriptions.

Access:

CTCP Trade Name Database is actively maintained by and is accessible through the Department of Pharmacology and Toxicology, University of Rochester Medical Center.

The CTCP Trade Name Database is derived from Section V, "Trade Name Index" of the book *Clinical Toxicology of Commercial Products*, and from the *"Bulletin of Supplementary Material: Clinical Toxicology of Commercial Products."* This monthly bulletin updates Section V of the book. It is available on a subscription basis from the University of Rochester. CTCP is also available online on the Chemical Information System (CIS). Refer to Appendix A for information about how to access CIS.

Cost:

The cost of searching, CTCP on CIS is $60 per connect hour. In addition to the search costs, there is an annual $300 subscription fee to defray storage costs.

Sample Search/Output:

```
OPTION? PHTHALATE ESTERS

FILE: 1 TOTAL NUMBER OF PRODUCTS FOUND:       4
        NUMBER OF CURRENT PRODUCTS:           2

OPTION? TYPE 2/2/2

FILE: 2 HRS NOT YET BEEN CREATED.
```

Sample Search/Output (continued):

```
SYNTRX ERROR IN COMMAND
OPTION?  TYPE 1/2/2

ENTRY       2 ACCESSION #     728  (OLD FORMULATION)
DURATITE GENERAL PURPOSE CEMENT
  CEMENT/GENERAL/PURPOSE/ADHESIVES
  (DAP)
                           DATE OF ENTRY:         7-73
                           DATE OF LAST ACTIVITY:  7-74-REV
    INGREDIENT NAME                    CAS RN LOC #         AMOUNT
-------------------------------------------------------------------------

PHTHALATE SERIES
TOLUENE*..........................      108-88-3     293
BUTYL ACETATE*
KETONE*(!)
ISOPROPHYL ALCOHOL*..............        67-63-0     385
NITROCELLULOSE
(!)KETONE SOLVENTS                                   426E
----------------------------------

* * *     2 OTHER FORMULATIONS AVAILABLE
```

CURR/CONT

Scope:

Current Contents (CURR/CONT) is a series of weekly title listing summaries covering a total of nearly 7,000 journals. The seven weekly listings cover the following areas:

- Clinical Practice
- Life Sciences
- Agriculture, Biology and Environmental Sciences
- Engineering Technology and Applied Sciences
- Physical, Chemical and Earth Sciences
- Social and Behavorial Sciences
- Arts and Humanities

For each citation, the issue provides:

- Journal Accession Number
- Journal Title
- Language ID
- Journal Citation
- Author

A separate author address index locates the author for consultation.

Access:

Access is by subscription from Institute for Scientific Information, Philadelphia, PA.

Cost:

Each of the disciplines described above has its own weekly edition of Current Contents. Annual subscriptions are $165 per year for each discipline.

Sample Search/Output:

Not applicable.

DCP

Scope:

The Directory of Chemical Producers: United States of America (DCP) is an annually published book with quarterly updates. It provides ready reference to commercial chemical manufacturers and products produced in the U.S.A. Commercial chemicals are defined as those produced in excess of 1,000 pounds or $1,000 value per year. Indexes of products, companies, and regions provide access to manufacturer names, locations, and products. Supplemental information, such as annual production volumes and company relationships, are frequently included.

Data contained in the Directory are obtained from questionnaires returned from manufacturers, technical and trade journals, other contacts with manufacturers, and research. Sixteen hundred companies, representing 4,300 plant sites producing 10,000 chemicals, are reported in the volume. Each annual issue of the book contains only one year's data. The book has been published since 1961.

Access:

The Directory of Chemical Producers: United States of America is disseminated and produced by the Chemical Information Services Department, Chemical Industries Center, SRI-International, Inc., Menlo Park, California.

Cost:

The Directory of Chemical Producers is available on a subscription basis for $450 for the first year, and $300/year for subsequent renewal subscriptions. The subscription includes the book and quarterly updates.

Sample Search/Output:

Not applicable.

ECDIN

Scope:

The Environmental Chemicals Data and Information Network (ECDIN) is designed to be a database concerning chemicals and their relation to the environment to be used by the European Community. The ECDIN project, begun in 1973, is presently in pilot phase implementation at the Commission of the European Communities' Joint Research Center (JRC), Ispra, Italy. It is available online through the European Informatics Network (EIN) on an experimental basis and will be available online through the Commission of the European Communities' European Online Information Network (EURCNET).

ECDIN will contain relevant information on commercial chemicals produced in excess of 500 kilograms/year, some toxic natural products, compounds with significant toxicity, and by-products in manufacture and their metabolic degradation products.

Some 30,000 chemicals will be covered in ECDIN. The current pilot implementation has various amounts of data concerning 4,000 compounds. ECDIN will have full substructure search and display components. ECDIN has 10 categories of data for chemical substances: identification; chemical structure information; physical and chemical properties; analytical methods; supply, production, and trade; transport, packing, handling and storage; use and disposal; dispersion and transformation in the environment; effects of the chemical on the environment (toxicity); and regulatory data.

ECDIN encompasses some 100 data fields organized into 10 "data categories." These data categories largely reflect the system's file structure. All data categories and files are linked to some degree by the compound file. The 10 data categories are:

1. Identification
2. Chemical Structure Information
3. Physical and Chemical Properties
4. Analytical Methods
5. Supply, Production and Trade
6. Transport, Packing, Handling and Storage
7. Use and Disposal
8. Dispersion and Transformation in the Environment
9. Effects of Chemical on the Environment
10. Regulatory Data

Access:

Access to citations in the system will be by online search and CRT or printer display. The prototype service will be offered in Europe through:

CEC Referral Service
Commission of the European Communities (CEC)
Batiment Jean Monnet
Rue Alcide de Gaspery
B4-072 Kirchberg, Luxembourg
Mr. W. Huber, Head

Cost:

The prototype system will be available free in Europe.

Sample Search/Output:

Not available.

EIS PLANTS

Scope:

The EIS PLANTS database offers immediate answers to a broad range of questions concerning the U.S. industrial economy. The EIS PLANTS database includes current information on industrial firms with establishments of 20 or more employees in the contiguous United States. The establishments included account for approximately 90% of the total value of U.S. industrial shipments. Each record contains the plant name, location, telephone number, principal product (4- or 5-digit SIC), annual sales, estimated share of the market, employment level, and parent company information. Information can be retrieved in several ways. Users can query the system for the address and telephone number of plants conforming to specified constraints on geographic location, industry, and size. Queries can also be made on the basis of specified firm names to retrieve sales and employment data for any large public or private manufacturing or mining company. The EIS PLANTS file also permits the user to frame questions within the limits of any desired U.S. Census Bureau region, state, county, city, zip code, Business Economic Area (BEA), Standard Metropolitan Statistical Area (SMSA), and parent company state, city and zip code (or combinations thereof). Resultant records may be sorted in order of sales or in estimated share of the market. Data are generated from business magazines, trade journals, state and industrial directories, corporate financial reports, and Census Bureau statistics. Also included are thousands of inputs received directly from companies and corporations.

Access:

EIS PLANTS is available through the DIALOG information retrieval system. For information about how to access DIALOG, consult Appendix A.

Cost:

The cost of conducting a search on EIS PLANTS is $90 per connect hour and $0.50 per citation.

Sample Search/Output:

```
? BEGIN 22
          14jun77 11:03:56 User316
  $0.10   0.004 Hrs File1
          File22:EIS PLANTS (TYPES $0.50 EA.) MAR7
          Set Items Description (+=OR;*=AND;-=NOT)
          --- ------ ---------------------------
? EXPAND PN=CARPETS
Ref  Index-term               Type Items RT
E1   PN=CAPACITORS
        (PC=36750)-----------        76
E2   PN=CARBON & GRAPHITE
       PRODUCTS  (PC=36240)--        46
E3   PN=CARBON BLACK
        (PC=28950)-----------        39
E4   PN=CARBON PAPER &
       RIBBONS  (PC=395 50)---       50
E5   PN=CARBURETORS, RINGS &
       VALVE  (PC=35920)-----        76
E6  -PN=CARPETS--------------
E7   PN=CARPETS NEC
        (PC=22790)-----------        25
E8   PN=CELLULOSIC FIBERS

? EXPAND PC=2279
Ref  Index-term               Type Items RT
E1   PC=227-----------------        348
E2   PC=2271----------------         60
E3   PC=22710  (PN=WOVEN
       CARPETS & RUGS)-------        60
E4   PC=2272----------------        263
E5   PC=22720  (PN=TUFTED
       CARPETS & RUGS)-------       263
E6  -PC=2279----------------         25
E7   PC=22790  (PN=CARPETS
       NEC)-----------------         25
E8   PC=228-----------------        635
E9   PC=2281----------------        368
? SELECT E1
          1   348 PC=227
? SELECT CC=13(C)SF=FORTUNE
          2  3790 CC=13(C)SF=FORTUNE
? COMBINE 1 AND 2
          3    55  1 AND 2
? PRINT 3/5/1-40/CC/SD,D
Printed3/5/1-40/CC/SD,D
? LOGOFF
          14jun77 11:06:05 User316
  $3.24   0.036 Hrs File22 3 Descriptors
 $20.00   40 Prints
 $23.24   Estimated Total Cost
LOGOFF 11:06:12
```

EMIC

Scope:

The Environmental Mutagen Information Center (EMIC) specializes in the dissemination of information of relevance to the subject of environmental mutagenesis. EMIC uses the EMI online database and provides information services utilizing in-house subject expertise in response to users' queries. EMIC is concerned with reported testing of chemical substances and other environmental agents for mutagenicity, excluding for the most part papers dealing solely with UV and ionizing radiation. The EMIC database presently contains over 8,000 agents. EMIC services consist of answering written or telephoned queries regarding mutagenicity by providing searches of the EMIC database. Searches and services are free, except for several small classes of users. Queries and requests for services outside of EMIC's capabilities or subject area are usually referred to other information centers.

Bibliographic citations are available using controlled vocabulary terms such as:

- Agent
- Tissue Culture
- Taxonomic Name
- Test Object
- Chemical Abstracts Service Number
- EMIC Registry Number
- Translation
- Publication
- Type
- Citation
- Source
- Author
- Title

Access:

Use of EMIC is available through the National Library of Medicine Regional Libraries or directly from EMIC at:

Oak Ridge National Laboratories
Building 9224
Oakridge, Tennessee 37830
(615) 574-7871

Cost:

Costs to the Environmental Mutagen Information Center are charged to the user; there is no cost if the user is associated with a government agency, is a student, is an individual not receiving direct support for a research project, is a member of the Environmental Mutagen Society, or provides some reciprocal service for the Center.

Sample Search/Output:

Not available.

ENERGYLINE

Scope:

ENERGYLINE, produced by the Environment Information Center, provides broad coverage of scientific, engineering, political and socioeconomic aspects of energy policy, resources, conversion, and consumption. Its interdisciplinary approach offers access to over 5,000 international primary and secondary sources. ENERGYLINE corresponds to energy materials from Environment Abstracts from 1971 through 1975, and all materials from Energy Information Abstracts, beginning in January 1976. ENERGYLINE reports on a wide range of topics, including such areas as the following:

- Economics
- Policy and Planning
- Research and Development
- Resources and Reserves
- Unconventional Resources
- Solar Energy
- Fuel Processing and Transport
- Electric Power Generation
- Nuclear Resources and Power
- Thermonuclear Power
- Consumption and Conservation
- Environmental Impact

Access:

ENERGYLINE is available through the DIALOG and ORBIT information retrieval systems. For information about how to access DIALOG and ORBIT, consult Appendix A.

Cost:

The cost of conducting a search on ENERGYLINE is $90 per connect hour and $0.20 per citation.

Sample Search/Output:

```
? BEGIN 69
         6mar78 14:38:11 User316
  $0.13  0.005 Hrs File1*
File69:ENERGYLINE 71-DEC77
      (Copr. EIC)
         Set Items Description (+=OR;*=AND;-=NOT)
         --- ----- ------------------------------
? SELECT ECONOMICS, COAL PROCESSING; SELECT ECONOMICS, ENERGY-UNCONVENTION
          1    40 ECONOMICS, COAL PROCESSING
          2    22 ECONOMICS, ENERGY-UNCONVENTION
? SELECT ECONOMICS, FUEL; SELECT ECONOMICS, FUEL PROCESSING
          3     7 ECONOMICS, FUEL
          4     6 ECONOMICS, FUEL PROCESSING
```

Sample Search/Output (continued):

```
? SELECT ECONOMICS, GAS PROCESSING; SELECT ECONOMICS, GENERATION
              5     10 ECONOMICS, GAS PROCESSING
              6     78 ECONOMICS, GENERATION
? SELECT ECONOMICS, SYNTHETIC FUEL; SELECT ECONOMICS, PRODUCTION
              7     48 ECONOMICS, SYNTHETIC FUEL
              8     13 ECONOMICS, PRODUCTION
? COMBINE 1-8/OR
              9    216  1-8/OR
? SELECT COAL(W)GASIFICATION
             10    580 COAL(W)GASIFICATION
? SELECT COAL; SELECT SYNTHETIC(W)NATURAL(W)GAS; SELECT METHANE
             11   3017 COAL
             12    230 SYNTHETIC(W)NATURAL(W)GAS
             13    289 METHANE
? COMBINE 11 AND (12 OR 13)
             14    205  11 AND (12 OR 13)
? COMBINE 9 AND (10 OR 14)
             15     58  9 AND (10 OR 14)
? TYPE 15/6/1-3
15/6/1
0111050     77-024044
  INDUCTION HEATING FEASIBLE FOR IN SITU PROCESSING,

15/6/2
0111035     77-024029
  TECHNICAL,  ECONOMIC,  AND ENVIRONMENTAL EVALUATION OF IN SITU COAL
GASIFICATION,

15/6/3
0111012     77-024006
  UNDERGROUND GASIFICATION OF COAL,

? PRINT 15/5/1-58
Printed15/5/1-58
? LOGOFF
          6mar78 14:43:21 User316
  $7.83   0.087 Hrs File69 15 Descriptors
 $11.60   58 Prints
 $19.43   Estimated Total Cost
LOGOFF 14:43:29
```

ENVIROLINE

Scope:

ENVIROLINE contains abstracts and citations from Environment Abstracts, a major publication of the Environment Information Center, Inc. This reference source provides interdisciplinary scientific, technical, and socioeconomic coverage of the major English language and the more important non-English-language environmental and resources literature. Environment Abstracts includes approximately 10,000 unique abstracts per year drawn from over 5,000 periodicals, symposia, governmental and institutional reports, and other primary and secondary sources.

The following general subjects are covered:

- Air Pollution
- Chemical and Biological Contamination
- Energy
- Environmental Design and Urban Ecology
- Environmental Education
- Foods and Drugs
- General Environmental
- General International Environmental
- Land Use and Misuse
- Noise Pollution
- Non-Renewable Resources
- Oceans and Estuaries
- Population Planning and Control
- Radiological Contamination
- Renewable Resources - Terrestrial
- Renewable Resources - Water
- Solid Waste
- Transportation
- Water Pollution
- Weather Modification and Geophysical Change
- Wildlife

Access:

ENVIROLINE is available through the DIALOG and ORBIT information retrieval systems. For information about how to access DIALOG and ORBIT, consult Appendix A. To obtain the printed version, contact:

Environment Information Center, Inc.
292 Madison Avenue
New York, NY 10017
(212) 949-9494

Cost:

The cost of conducting a search on ENVIROLINE is $90 per connect hour and $0.20 per citation.

Sample Search/Output:

```
? BEGIN 40
              11jul77 16:47:48 User316
   $0.08      0.003 Hrs File1
              File40:ENVIROLINE 71-77/MAR
              Set Items Description (+=OR;*=AND;-=NOT)
              --- ----- ----------------------------
? SELECT NUCLEAR(W)POWER
                1   1518 NUCLEAR(W)POWER
? SELECT NUCLEAR(W)REACTOR; SELECT NUCLEAR(W)REACTORS
                2    334 NUCLEAR(W)REACTOR
                3    354 NUCLEAR(W)REACTORS
? SELECT SAFETY; SELECT HAZARD?; SELECT RISK?
                4   2207 SAFETY
                5    932 HAZARD?
                6    304 RISK?
? COMBINE 1-3/OR; COMBINE 4-6/OR
                7   1840  1-3/OR
                8   3015  4-6/OR
? COMBINE 7 AND 8
                9    397  7 AND 8
? TYPE 9
1
*77-001879    0119420
  ENVIRONMENTAL ASSESSMENT: PINELLAS PLANT, ST. PETERSBURG, FLORIDA,
  PUBL: ERDA REPORT, DEC 75 (162)
  DESCRIPTORS:  *NUCLEAR  REACTORS  ;*ENV IMPACT STATEMENT ;*FLORIDA ;
*NUCLEAR  WEAPONS ;*REACTOR SAFETY ;*COST BENEF ANALYSIS-NUCLEAR POWER
;*RADIOISOTOPES  ;*RADIOACTIVE  WASTE MANAGEMENT ;*LAND USE PLANNING ;
*BIOTA   ;HEALTH   SAFETY,  OCCUPATIONAL  ;RADIATION,  ATOMIC-DOSES  ;
RADIATION, ATOMIC-STANDARDS ;MONITORING, ENV-RADIATION
  REVIEW CLASSIFICATION: 14
```

Sample Search/Output (continued):

```
? SELECT REACTOR SAFETY
          10   343 REACTOR SAFETY
? COMBINE 9 OR 10
          11   496  9 OR 10
? LIMIT 11/0108358-0199999
          12   110  11/0108358-0199999
? PRINT 12/5/1-110
Printed12/5/1-110
? LOGOFF
          11jul77 16:50:17 User316
  $3.78   0.042 Hrs File40 10 Descriptors
 $22.00   110 Prints
 $25.78   Estimated Total Cost
LOGOFF 16:50:24
```

```
DIALOG Accession Number ——
     *76-006835   0115737←
       ACUTE  AND  CHRONIC  TOXICITY  OF  HYDROGEN  SULFIDE  TO THE FATHEAD← /T
     MINNOW, PIMEPHALES PROMELAS.
AU= →SMITH,   LLOYD  L.   , OSEID DONAVON M., OLSON LARRY E.   :   UNIV OF← /C
     MINNESOTA.                                                             /S
       PUBL: ENV SCIENCE & TECHNOLOGY, JUN 76, V10, N6, P565 (4)
       DESCRIPTORS:   *HYDROGEN   SULFIDE   :*PATHOLOGY,  FISH-LAB  :*WATER} ← /D
     TEMPERATURE :*REPRODUCTION, FISH :*FISH, FRESHWATER :BIOASSAY          }
RC= →REVIEW CLASSIFICATION: 19
DT= →RESEARCH  REPORT:  TOXIC  EFFECTS  OF MOLECULAR HYDROGEN FULFIDE TO}
     EGGS,  FRY,  AND  JUVENILES  OF THE FATHEAD MINNOW PIMEPHALES PROMELAS}
     RAFINESQUE  ARE  DETERMINED  IN  FLOW-THROUGH BIOASSAYS. FRY ARE ABOUT}
     TWICE  AS  SENSITIVE AS JUVENILES ARE. ACUTE TOXICITY TO JUVENILE FISH} ← /A
     IS GREATLY CHANGED BY TEMPERATURE. EFFECTS ON WILD STOCK JUVENILES AND}
     ON A LABORATORY CULTURED STOCK ARE DESCRIBED (5 TABLES)               }
```

ETIC

Scope:

The Environmental Teratology Information Center (ETIC) specializes in the dissemination of information related to the evaluation of chemical, biological, and physical agents for teratogenic activity. ETIC uses the ETIC online data base and in-house subject expertise to answer user queries.

ETIC's information base is derived largely from reported testing which involves the administration of a chemical agent to a pregnant animal and subsequent examination of the offspring at or near birth for structural or functional anomalies, and from reports implicating agents which produce defects in man. Additional references are obtained from the open literature on testing and evaluation of chemical, biological and physical agents and of dietary deficiencies in warm-blooded animals. There are 16,000 entries dating back to 1950 describing 4,000 suspect or known teratogens. The file provides citations and lists of expert consultants. Some 1,200 citations are added per year.

Access:

The ETIC is accessible through the National Library of Medicine Regional Libraries or directly from ETIC at:

NIEHS
P.O. Box 12233
Research Triangle Park, NC 27709
(919) 541-3418

Cost:

Costs to the Center are charged to the user. There is no cost if the user is associated with a government agency, is a student, is an individual not receiving direct support for a research project, or provides some reciprocal service to the Center.

Sample Search/Output:

Not available.

FEDERAL INDEX

Scope:

FEDERAL INDEX provides access to information on Federal government activities including hearings, speeches, bill introductions, roll calls, and other activities of the U.S. Congress; existing and proposed rules and regulations; notices, hearings, contract awards, and other activities of the executive departments and agencies; presidential views, proclamations, final actions on legislation, and other activities; and court decisions and other judicial activities. The online file corresponds to the hardcopy Federal Index.

FEDERAL INDEX is an interdisciplinary source of information on trends and developments in Washington. Areas covered include:

- Current Events
- Finance
- Government
- Banking
- Politics
- International Relations
- Business
- Trade
- Legislation
- Diplomacy

Access:

FEDERAL INDEX is available through the DIALOG and ORBIT information retrieval systems. For information about how to access DIALOG and ORBIT, consult Appendix A.

Cost:

The cost of conducting a search on FEDERAL INDEX is $90 per connect hour and $0.20 per citation.

Sample Search/Output:

```
SS  2/C?
USER:
FILE FEDEX

PROG:
ELAPSED TIME ON ISMEC:  0.04 HRS.
YOU ARE NOW CONNECTED TO THE FEDERAL INDEX DATABASE.
 COVERS FROM OCTOBER 1976 THRU MAY 1980 (8005) AND WEEKLY 98016)

SS  1/C?
USER:
HAZARDOUS AND WASTE AND REGULATIONS AND SOLID

PROG:
SS  1 PSTG (8)
```

Sample Search/Output (continued):

```
SS  2/C?
USER:
PRINT 1 FULL

PROG:

-1-
AN  -  252913
TI  -  EPA:  EXAMINES NEW REGULATIONS FOR HAZARDOUS WASTE DISPOSAL
       POSSIBLE COST OF OLD DUMP CLEANUP
SO  -  #SCI NEWS; P. 348, 79/05/26
IT  -  GOVERNMENT AGENCY:  ENVIRONMENTAL PROTECTION AGENCY (9138600)
IT  -  AGENCY/INDUSTRY:  INDUSTRIAL SOLID WASTE DISPEL (4953010);
       CHEMICALS & ALLIED PRODUCTS (2800000)
IT  -  GOVERNMENTAL FUNCTION:  SOLID WASTE PROGRAMS (9106420); TOXIC
       SUBSTANCES REGULATION (9106470)
IT  -  EVENT:  POLLUTION REGULATN (935)
IT  -  STATUS:  AGENCY RULES (085)
IT  -  COUNTRY:  UNITED STATES (1USA)
```

FRSS

Scope:

The Federal Register Search System (FRSS) provides a cross reference to all of the citations relating to a chemical or class of chemicals cited in the Federal Register since January 1, 1978. The Federal Register citation and a short description of the Federal Register notice or regulation are included for each citation. The database is updated weekly.

Access:

FRSS is available through the Chemical Information System (CIS). For information about how to access CIS, consult Appendix A.

Cost:

FRSS searches cost $60 per hour. In addition to the search costs, there is an annual $300 subscription fee, which is used to defray storage costs.

Sample Search/Output:

```
Option?  FREF/43FR4849

FILE:  11   COUNT:   2

Option?  TYPE 11//1-2

            FILE 11:  ELEMENT      1
CITATION NUMBER=  43.25.1 (43FR4849ff, 2-6-78)
Tris
(2,3-Dibromopropyl)phosphate
TRIS
Final Rule; Revision of 16CFR1615.1(e), Revision of 16CFR1615.3(a),
delete 16CFR1615.3(b)(3), revision of 16CFR1615.4(a),(b)(2),(c)(4)(iv),
(c)(4)(vi),(d)(2)(i),(d)(2)(ii)(A) and (B),(d)(3)(i)(A),(d)(3)(i)(B)(3),
(g)(2)(i),(g)(3), revision of 16CFR1615.31(e)(1)(iii), revision of
16CFR1616.4(c)(2)(ii)(A) and (B),Consumer Product Safety Commission,
Flammable Fabrics Act; Amend standard for flammability of children's
sleepwear; Suspected carcinogen(icity);  Effective date 2-6-78.
(42FR56568)

            FILE 11:  ELEMENT      2
CITATION NUMBER=  43.25.2 (43FR4849, 2-6-78)
Fyrol FR-2 (SUPPLEMENTARY MENTION)
Final rule; Revision of 16CFR1615, revision of 16CFR1616, Consumer
Product Safety Commission; Supplementary mention to Tris (43.25.1)
```

FSTA

Scope:

Food Science and Technology Abstracts (FSTA) provides access to research and new development literature in the areas related to food science and technology. Basic allied disciplines such as chemistry, physics, biochemistry, and agriculture are covered as well. Fringe areas, such as home economics and engineering, are included when relevant to food science.

FSTA reports on a wide range of topics, including such areas as the following:

- Basic Food Science
- Food Microbiology
- Food Hygiene
- Food Engineering
- Food Packaging
- Commodity Technologies
- Beverages
- Food Additives
- Fruits, Vegetables, Nuts
- Sugars
- Cocoa and Chocolate Products
- Fats, Oils
- Fish
- Dairy Products
- Meat, Poultry, Game
- Food Laws, Regulations

Access:

FSTA is available through the DIALOG and ORBIT information retrieval systems. For information about how to access DIALOG and ORBIT, consult Appendix A.

Cost:

The cost of conducting a search on FSTA is $65 per connect hour and $0.12-0.15 per citation.

Sample Search/Output:

```
? BEGIN 51
         3mar78 8:24:57 User316
   $0.13 0.005 Hrs File1*
File51:FSTA 69-FEB78
         Set Items Description (+=OR;*=AND;-=NOT)
         --- ----- ------------------------------
? SELECT REGULAT?; SELECT STANDARD?
           1  4143 REGULAT?
           2 10150 STANDARD?
? SELECT NITRITE?; SELECT NANO2; SELECT NANO(1W)2; SELECT NA(W)NO(1W)2
           3  1143 NITRITE?
           4   133 NANO2
           5   149 NANO(1W)2
           6     1 NA(W)NO(1W)2
? COMBINE 3-6/OR
           7  1240  3-6/OR
? SELECT PORK; SELECT HAM; SELECT BACON; COMBINE 8-10/OR
           8  2562 PORK
           9  1171 HAM
          10   660 BACON
          11  3875  8-10/OR
? COMBINE (1 OR 2) AND 7 AND 11
          12    65  (1 OR 2) AND 7 AND 11
? TYPE 12/6/1-3
12/6/1
00143123    77-12-S2050
  (DETERMINATION OF NITRITE IN IMPORTED MEAT AND MEAT PRODUCTS.)

12/6/2
00140275    77-10-U0786
  SPECIFICATION FOR HAM, CANNED.

12/6/3
00134563    77-06-S1260
  (RATIONALIZATION OF MANUFACTURE OF RAW HAM.)
  DIE RATIONELLE HERSTELLUNG VON ROHEN SCHINKEN.

? PRINT 12/5/1-65
Printed12/5/1-65
? LOGOFF
         3mar78 8:28:14 User316
   $3.64 0.056 Hrs File51 12 Descriptors
   $9.75 65 Prints
  $13.39 Estimated Total Cost
LOGOFF 8:28:23
```

Sample Search/Output (continued):

```
DIALOG           RN=
Accession→00021381    70-09-P1199
Number     FROZEN YOGURT DESSERT PROVES PROFITABLE, POPULAR.←——————————— /TI
   AU= →ANON.
JO=    →FOOD PROCESSING,  1970,   31 (4) 36
  PD=  →Languages: EN
LA=
           A  FROZEN  DESSERT  MADE  FROM  A  MIX SIMILAR TO ICE CREAM WITH THE
          ADDITION OF YOGHURT  AFTER  PASTEURIZATION,  HAS  BEEN  DEVELOPED  BY
          GROCER'S  DAIRY  CO.   FRUIT  SOLIDS,  OR VANILLA IS ADDED JUST BEFORE  }← AB
          FILLING INTO 4-FLUID OZ CUPS.  THE DESSERT CONTAINS ONLY 1.5%   BUTTER
          FAT AND 53%  FEWER CALORIES THAN ICE CREAM.  STANDARD ICE CREAM MIXING
          AND HOLDING TANKS, PASTEURIZER AND FREEZERS ARE USED. (PEG)
           Descriptors: FREEZING -  FREEZING OF  DESSERT  CONTAINING  YOGHURT;
          DESSERTS - FREEZING OF DESSERT CONTAINING YOGHURT; YOGHURT -  FREEZING
          OF DESSERT CONTAINING YOGHURT;  VANILLA -  FROZEN  DESSERT  CONTAINING
          VANILLA;  FRUIT  -  FROZEN DESSERT CONTAINING FRUIT SOLIDS;  SOLIDS -  }← DE
          FROZEN DESSERT CONTAINING FRUIT SOLIDS; MILK FATS -  BUTTERFAT CONTENT
          OF  FROZEN  YOGHURT  DESSERT;  CALORIES  -  CALORIE CONTENT OF FROZEN
          YOGHURT DESSERT
```

HEEDA

Scope:

The Health Effects and Environmental Data Analysis System (HEEDA) is currently under development and is being designed to provide a mechanism for testing and evaluating various structure activity models. The goal is to develop set of methods for discovering quantitative structure/activity relationships. These relationships are sought in a multi-stage process:

- Organize substances by chemical structure classes;
- Construct class oriented models of the substances from descriptive characteristics;
- Obtain valid end effects data; and
- Correlate the structural characteristics of the models with the known effects data.

In essence, the system will have two major components. One component manages chemical descriptive and structural data and the end effects data, and the other contains the predictive models or ranking algorithms that operate on the data.

There is currently no single source for the data for either chemicals or effects; therefore, HEEDA can benefit from the existence of CSIN to bring together data from other systems for structure activity analysis. Possible sources of data are:

- Post Experimental Information System (PEIS) of the Toxicology Data Management System (TDMS)
- Chemical Substance Nomenclature System (CSNS)
- Chemicals In Commerce Information System (CICIS)
- NIOSH Registry of Toxic Effects of Chemical Substances (RTECS)

Access:

Not available at the present time. HEEDA is being considered for inclusion as a CSIN component database.

Cost:

Not available.

Sample Search/Output:

Not applicable.

HMSM

Scope:

The Hazardous Materials Spill Monitoring - Safety Handbook and Chemical Hazard Guide (HMSM) is an EPA generated manual intended to provide information on how to prevent accidental exposure to hazardous materials and on first-aid measures in the event of an accident.

The compounds in the HMSM correspond to those in the Chemical Spills database compiled by the Water and Land Quality Branch, Monitoring Operations Divisions, Environmental Monitoring and Support Laboratory of the U.S. Environmental Protection Agency. That database includes all chemicals tentatively designated as hazardous by the EPA in the Federal Register, Vol 39, No. 169, Aug. 22, 1974, all chemicals in the U.S. Coast Guard "CHRIS" manuals, Jan. 1974, and those hazardous materials reported as spilled during the period 1970-1974. The manual indicates, for each compound, recommended safety procedures for entering a spill area, the principal hazards associated with a spill, and the recommended immediate action to be taken (prior to the arrival of medical aid) in the event of exposure. Compounds are indexed in this manual by name; common synonyms as well as available trade names are included. A priority listing of the compounds based upon their hazard ratings and reported spill frequency is also included.

Access:

For more information on this manual, contact:

Llewellyn R. Williams, PH.D
Chief, Interpretations & Reports Section
Water and Land Quality Branch
U.S. Environmental Protection Agency
Environmental Monitoring and Support Lab.
P.O. Box 15027
Las Vegas, Nevada 89114
(702) 736-2969

Cost:

Not available.

Sample Search/Output:

Not applicable.

IEDC

Scope:

The Ion Energetics Data Center (IEDC) at the National Bureau of Standards offers a database of critically evaluated ion energetics measurements. A comprehensive publication of these evaluated data and associated measurements, references, and critical commentary has been published (H.M. Rosenstock, K. Draxl, B. Steiner and J.T. Herron, "Energetics of Gaseous Ions" J. Phys. Chem. Ref. Data 6, Supplement 1 (1977)). The database will also be part of the Chemical Information System (CIS).

A major component of this evaluated database is first ionization potentials of over 3,100 neutral organic and inorganic species, and heats of formation of many precursors. The ionization potential measurements are based on all pertinent techniques including spectroscopy, photoelectron spectroscopy, photoionization, electron impact, and other less widely used techniques.

Access:

Until IEDC becomes a fully accessible part of CIS, further information regarding IEDC can be obtained by contacting:

Dr. Henry M. Rosenstock
Chemical Thermodynamics Division 543
National Bureau of Standards
Washington, DC 20234
Telephone: (301) 921-2793

Cost:

Not available.

Sample Search Output:

Not available.

INSPEC

Scope:

The Science Abstracts family of abstract journals, indexes, and title bulletins commenced publication in 1898. Today it forms the largest English language database in the fields of physics, electrical engineering, electronics, computers, and control engineering. Foreign language source material is also included, but abstracted and indexed in English. The database includes Physics Abstracts, as well as Electrical and Electronics Abstracts and Computer and Control Abstracts.

The principal subject areas are indicated below:

- Atomic and Molecular Physics
- Computer Programming and Applications
- Computer Systems and Equipment
- Condensed Matter: Electrical Magnetic, and Optical Properties
- Condensed Matter: Structure, Thermal, and Mechanical Properties
- Control Technology
- Electrical and Magnetic Devices
- Electromagnetics, Optics, and Circuits
- Gases, Fluid Dynamics and Plasmas
- General Topics
- Elementary Particle Physics
- Instruments and Measurement
- Interdisciplinary Subjects
- Information/Communication Science and Engineering
- Mathematics and Mathematical Physics
- Nuclear Physics
- Power Systems and Applications

Access:

INSPEC is available through the DIALOG and ORBIT information retrieval systems. For information about how to access DIALOG and ORBIT, consult Appendix A.

Cost:

The cost of conducting a search on INSPEC is $55 per connect hour and $0.15 per citation.

Sample Search/Output:

```
? BEGIN  13
          7jun77 16:15:50 User316
$0.08     0.003 Hrs File1
          File13:INSPEC-ELEC & COMPUT 69-77/ISS05
          Set Items Description (+=OR;*=AND;-=NOT)
```

Sample Search/Output (continued):

```
? SELECT LIBRARY; SELECT LIBRARIES; SELECT INFORMATION SERVICES
          1  1451 LIBRARY
          2   830 LIBRARIES
          3  1424 INFORMATION SERVICES
? COMBINE 1-3/OR
          4  2923  1-3/OR
? SELECT AUTOMATION; SELECT MECHANISATION; SELECT MECHANIZATION
          5  4009 AUTOMATION
          6   695 MECHANISATION
          7   123 MECHANISATION
? COMBINE 5-7/OR
          8  4634  5-7/OR
? SELECT CIRCULATION; COMBINE 9 AND 4 AND 8
          9   508 CIRCULATION
         10    54  9 AND 4 AND 8
? TYPE 10/6/1-4
1006810   C77004469
  SURVEY OF DATA COLLECTION SYSTEMS FOR COMPUTER-BASED LIBRARY
CIRCULATION PROCESSES

2
1006804   C77004463
  THE DEMAND DISTRIBUTED COLLECTION' AN ALTERNATE LIBRARY ORGANISATION

3
960708   C76243440
  INTERACTIVE INFORMATION TRANSFER IN AN INDUSTRIAL LIBRARY NETWORK

4
960704   C7624336
  MINIS IN CIRCULATION CONTROL' SOME PARAMETERS AND EXAMPLES

? PRINT  10/5/1-54
Printed10/5/1-54
? LOGOFF
         7jun77  16:18:18 User316
  $1.89  0.042 Hrs File13 7 Descriptors
  $5.40  54 Prints
  $7.29  Estimated Total Cost
LOGOFF 16:18:24
```

IRLG SKILLS INVENTORY

Scope:

The Interagency Regulatory Liaison Group (IRLG) Skills Inventory is a computerized database containing the records of approximately 3,600 professional personnel from four IRLG Agencies (CPSC, EPA, FDA and OSHA). The system is ideally suited to identification of employees whose background and experience are tailored to meet a particular short-term need. Response to the system has been voluntary. Employees filled out questionnaires indicating qualifications or professional abilities which might be utilized in special assignments. To enable administrative personnel to identify individuals in the database, several easily searchable indexes have been defined as follows:

- Organization
- Location
- Discipline
- Specialty areas
- Experience (500 categories)
- Chemical or substance expertise
- Language

Results of the searches can be a listing of the entire record or any portion thereof for each selected person. Reports tailored to each specific request can be produced. Optionally, statistical reports of how many persons meet search criteria can also be produced.

Access:

Requests should be made in writing (other than emergencies) and directed to: Ms. Linda M. Billings, TS-793, Office of Pesticides and Toxic Substances, U.S. Environmental Protection Agency, 401 M Street, S.W., Room 415 ET, Washington, D.C. 20460, telephone: (FTS) 426-9408.

The Privacy Act requires certain restrictions on use of the system. Information collected in response to the Skills Inventory may be used only internally by personnel in EPA, CPSC, FDA, or OSHA to identify individuals having appropriate expertise for appointment or nomination to working groups and task forces, provision of consultative support on projects, and contact on collaborative studies. These activities may be in support of agency goals or in furtherance of IRLG mandates. The system may not be used in conjunction with any personnel action under the Merit Promotion Program, or any other system.

Cost:

Not available.

Sample Search/Output:

Not available.

ISMEC

Scope:

The ISMEC (Information Service in Mechanical Engineering) database corresponds to the biweekly printed ISMEC Bulletin. ISMEC indexes significant articles in all aspects of mechanical engineering, production engineering, and engineering management from approximately 250 journals published throughout the world. In addition, books, reports and conference proceedings are indexed. These sources are further supplemented by relevant material from more than 2,000 periodicals in physics and engineering that are received. The primary emphasis is on comprehensive coverage of leading international journals and conferences on mechanical engineering subjects.

The principal subject areas are indicated by the hierarchical classification scheme developed by ISMEC. A representative, but not exhaustive, listing of the sections comprising each division is given below:

- Management and Production
  - Management Studies
  - Production
- Measurement and Control
  - Measurement Science
  - Measurement and Control of Specific Variables
  - Measurement and Control of Equipment
- Mechanics, Materials, and Devices
  - Analytical Mechanics
  - Mechanical Properties and Effects
  - Physical and Chemical Properties and Effects
  - Materials Testing
  - Fluid Mechanics
  - Tribology
  - Mechanical Components
  - Acoustic Devices and Equipment
- Mechanical Engineering and Natural Resources
  - Agricultural Engineering
  - Mining
  - Oil and Natural Gas
  - Ecology
- Production Processes, Tools, and Equipment
  - Hardening
  - Forming Processes and Equipment
  - Machining and Machine Tools
  - Joining Processes and Equipment
  - Finishing Processes and Equipment
  - Hand Tools
- Energy and Power
  - Thermodynamics
  - Heating, Cooling and Ventilating
  - Fuel Technology
  - Engines
  - Mechanical and Fluid Power Transmission
- Transport and Handling
  - Motor Vehicle Engineering
  - Motorless Vehicle Engineering
  - Railway Engineering
  - Marine Engineering
  - Aerospace Engineering
  - Mechanical Handling

- Mechanical Engineering in Science and Industry
  - Nuclear Engineering
  - Electrical Engineering
  - Electronic Engineering
  - Civil Engineering
  - Optical Engineering
  - Medical Engineering
  - Industrial Process Engineering
- Other Applications of Mechanical Engineering
  - Military Engineering
  - Business Equipment
  - Domestic Equipment
  - Other Special Applications

Access:

ISMEC is available through the DIALOG and ORBIT information retrieval systems. For information about how to access DIALOG and ORBIT, consult Appendix A.

Cost:

The cost of conducting a search on ISMEC is $75 per connect hour and $0.15 per citation.

Sample Search/Output:

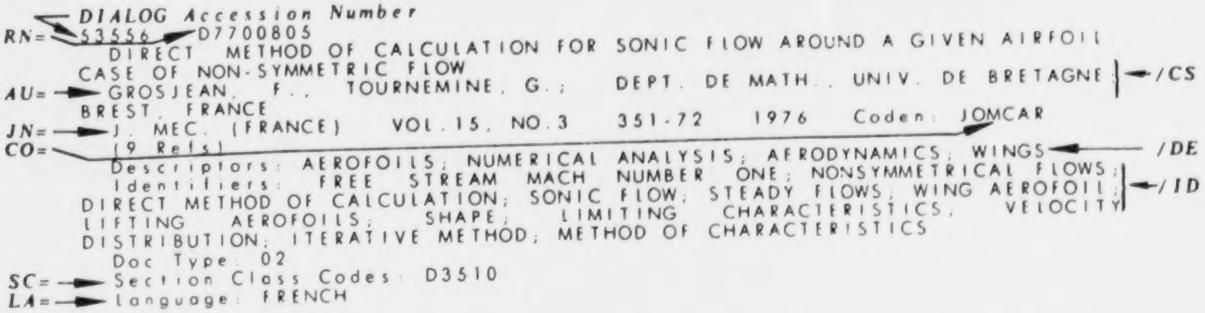
```
? BEGIN 14
        14jun77 15:10:12 User316
       $0.10  0.004 Hrs File1
        File14:ISMEC-MECH ENGR 73-77/ISS05
        Set Items Description (+=OR;*=AND;-=NOT)
        --- ----- -----------------------------
?SELECT STAINLESS STEEL
          1   472 STAINLESS STEEL
? EXPAND (FRACTURE)
Ref  Index-term               Type Items RT
R1   FRACTURE----------------      1293  8
R2   BREAKAGE----------------F       25  1
R3   BRITTLENESS-------------R      181 13
R4   CRACKING----------------F      407  1
R5   CRACKS------------------N      785  9
R6   MECHANICAL PROPERTIES
       OF SUBSTANCES---------B           28
R7   MECHANICAL PROPERTIES
       OF SUBSTANCES---------T           28
R8   PLASTIC DEFORMATION-----R      504 13
R9   TENSILE STRENGTH--------R      376  9
? SELECT R1-R5, R8, R9
          2  2898 R1-R5, R8, R9
                   R1: FRACTURE
? COMBINE 1 AND 2
          3    96  1 AND 2
? TYPE 3/6/1-3
1
55627    D7702876
  THE  NATURE AND MORPHOLOGY OF FISSURES IN AUSTENITIC STAINLESS STEEL
WELD METALS
```

Sample Search/Output (continued):

```
2
54811   D7702060
  CAVITATION DURING SUPERPLASTIC FLOW (OF STAINLESS STEEL AND BRASS)

3
54793   D7702042
  DETECTION AND TOUGHNESS CHARACTERISATION OF DUCTILE CRACK INITIATION
IN 316 STAINLESS STEELS

? PRINT 3/5/1-96
Printed3/5/1-96
? LOGOFF
          14jun77 15:11:55 User316
  $1.89   0.029 Hrs File14 8 Descriptors
 $11.52   96 Prints
 $13.41   Estimated Total Cost
LOGOFF 15:12:01
```



```
53556   D7700805
    DIRECT  METHOD OF CALCULATION FOR SONIC FLOW AROUND A GIVEN AIRFOIL
  CASE OF NON-SYMMETRIC FLOW
   GROSJEAN, F.,  TOURNEMINE, G.;   DEPT. DE MATH., UNIV. DE BRETAGNE;
  BREST, FRANCE
   J. MEC. (FRANCE)   VOL.15, NO.3   351-72   1976   Coden: JOMCAR
   (9 Refs)
   Descriptors: AEROFOILS; NUMERICAL ANALYSIS; AERODYNAMICS; WINGS
   Identifiers:  FREE  STREAM  MACH  NUMBER  ONE; NONSYMMETRICAL FLOWS;
  DIRECT METHOD OF CALCULATION; SONIC FLOW; STEADY FLOWS; WING AEROFOIL;
  LIFTING  AEROFOILS;  SHAPE;  LIMITING  CHARACTERISTICS,  VELOCITY
  DISTRIBUTION; ITERATIVE METHOD; METHOD OF CHARACTERISTICS
   Doc Type: 02
   Section Class Codes: D3510
   Language: FRENCH
```

KIRK-OTHMER

Scope:

The Kirk-Othmer Encyclopedia of Chemical Technology is a reference text which covers virtually all major aspects of chemical technology and related topics: industrial products, natural resources, manufacturing processes, and chemical uses. The third edition will include topics such as energy, health, safety, toxicology, new materials, polymer and plastics technology, inorganic and solid-state chemistry, composite materials, fermentation and enzymes, coatings, pharmaceuticals, and surfactant technology.

Second edition volumes were sequentially published from 1963-1972. In the 25 volumes of the third edition, approximately 1,000 articles written by subject experts will appear. The third edition volumes are being issued at a rate of four per year; completion of the set is expected in 1983.

Access:

The Kirk-Othmer Encyclopedia of Chemical Technology is published by Wiley-Interscience, New York (212) 867-9200.

Cost:

The third edition of the Kirk-Othmer Encyclopedia of Chemical Technology is available by subscription for $95 per volume.

Sample Search/Output:

Not applicable.

LADB

Scope:

The Laboratory Animal Data Bank (LADB) is an online interactive database sponsored by the National Library of Medicine and the Department of Health and Human Services Committee to Coordinate Toxicology and Related Programs. LADB is designed to provide control baseline data on major strains of laboratory animals. Most of these data are not available from the published journal literature, technical reports, texts, or handbooks, and hence has been collected directly from research institutions. LADB is searched using a detailed user-response (menu) approach or by direct commands. Additionally, LADB has a processing capability which allows the user to enter his/her own data for comparison against baseline files. This provides a means for statistical comparison of control animal response with the user's test animal response. LADB also assists the user in determining protocol, environmental and husbandry factors used to control each animal colony, and in selecting baseline data from colonies of the user's choice for numerous measured or observed variables. Output may be printed or displayed as preset formatted reports or as user-selected distribution curves or reports.

Only two of five planned files have currently been implemented. The Strain file contains descriptions and facts on various animal species and strains used in research activities. Data and information concern normal, not experimentally manipulated, animals. The Baseline file contains detailed clinical chemistry, hematology, pathology, growth/lifespan, environmental, and animal husbandry data for over 70 animal colonies.

Data Files:

1. Baseline File
2. Strain File
3. Husbandry File (to be implemented)
4. Protocol File (to be implemented)
5. Analytical Procedures (to be implemented)

Access:

LADB is currently available online to experimental users only through the National Library of Medicine.

Cost:

Not available.

Sample Search/Output:

Not available.

MEDLINE

Scope:

MEDLINE is a medical bibliographic database which indexes 3,000 medical journals for the period starting January 1977 to the present. The annual entry rate is 380,000 to 630,000 articles cited per year and the total file at present is over 2,000,000 entries concerning medical science. Health effects due to chemical exposure are included. Index Medicus, the printed equivalent to MEDLINE, goes back to January 1966, but pre-1977 citations are not available on-line. Search terms used are taken from a Medical Subject Heading (MeSH) thesaurus.

Access:

MEDLINE is a component of MEDLARS (Medical Literature Analysis and Retrieval System). Refer to Appendix A for information about how to gain access to MEDLARS.

Cost:

A MEDLINE search costs $15 per connect hour, plus $0.15 per page printed offline.

Sample Search/Output:

```
AU -  OGNIANOV D; PANOVA M; GENCHEV GA
TI -  !ISOLATION OF CHLAMYDIA IN KERATOCONJUNCTIVITIS1
LA -  BUL
MH -  ACUTE DISEASE; ANIMAL; CATTLE DISEASES/*MICROBIOLOGY; CATTLE;
      CHLAMYDIA/* ISOLATION & PURIFICATION/PATHOGENICITY; DOG
      DISEASES/*MICROBIOLOGY; DOGS; ENGLISH ABSTRACT;
      KERATOCONJUNCTIVITIS/ETIOLOGY/MICROBIOLOGY/VETERINARY; RABBITS;
      TEARS/MICROBIOLOGY
DA -  790223
DP -  1978
IS -  0506-8215
TA -  VET MED NAUKI
UI -  79078357
PG -  26-31
SB -  M
ZN -  Z1.542.248.208
EA -  A
IP -  3
TT -  IZOLIRANE NA KHLAMIDIIA PRI KERATOKONIUNKTIVITI.
VI -  15
JC -  XCE
AA -  AUTHOR
EM -  7904
AB -  TWO ISOLATES, IDENTIFIED AS CHLAMYDIA (NEORICKETTSIA) WERE OBTAINED
      FROM THE LACRIMAL SECRETION OF CALVES WITH AN ACUTE INFECTION IN TWO
      OF A TOTAL OF FOUR INVESTIGATED FARMS WITH A RECORD OF INFECTIOUS
      KERATOCONJUNCTIVITIS.  IN ABOUT 70% OF THE CALVES THAT SURVIVED
      THERE WERE COMPLEMENT-FIXING ANTIBODIES AGAINST THE NEORICKETTSIAL
      ANTIGEN, THE TITERS RANGING FROM 1:8 TO 1:64.  CALVES THAT YIELDED
      THE CAUSATIVE AGENT WERE INVESTIGATED IN TERMS OF THE ANTIBODY
      DYNAMICS.  IN THE REMAINING HERDS NO SPECIFIC ANTIBODIES WERE
      DEMONSTRATED IN ANIMALS THAT HAD SURVIVED.  ONE OF THE ISOLATED
      STRAINS WAS USED TO INFECT (VIA THE EXTERNAL CAMERA OCULI) A RABBIT.
      ACUTE KERATOCONJUNCTIVITIS FOLLOWED, AND THE BLOOD SERUM OF THE
      RABBIT WAS FOUND TO CONTAIN COMPLEMENT-FIXING ANTIBODIES OF A TITER
      WITH THE 1:8-1:16 RANGE FROM THE 30th DAY ON.  A NEORICKETTSIAL
      STRAIN WAS ALSO ISOLATED FROM THE OCULAR SECRETION OF A DOG WITH
      SEROFIBRINOUS KERATOCONJUNCTIVITIS, AND THIS WAS REGARDED AS A
      RARELY ENCOUNTERED FINDING.

CI -  0506-8215 15:26 78
SO -  VET MED NAUKI 1978;15(3):26-31
```

MERCK INDEX

Scope:

The Merck Index: An Encyclopedia of Chemicals and Drugs, is a one-volume reference book containing nearly 10,000 monographs and over 30 tables presenting information on chemical substances. It includes 8,000 structural displays of life formulas and 50,000 chemical synonyms. The Index has been published since 1889 and is currently in its ninth edition.

The Merck Index describes the preparation and general chemical properties of compounds; correlates trivial, generic (drug), and chemical names with structures, trademarks, and company affiliations; and provides succinct information as to the use, principal pharmacological action, and toxicity of substances covered. The text of the book is organized into a main monographs section, tables, and indexes. Indexes of chemical formulas and chemical names provide access to the monographs. Over 30 tables provide chemical-related data.

The information descriptions for the 10,000 chemicals listed include:

- Monograph Number
- Title
- Chemical Abstracts Name(s)
- Alternate Names
- Structure
- Empirical Formula
- Molecular Weight
- Percentage Composition
- Caution
- Use
- Literature References
- Physical Data
- Derivatives
- Therapeutic Category (THERAP CAT)
- Therapeutic Category (THERAP CAT/VET)
- Toxicity Data
- Human Toxicity

Access:

A copy of the Merck Index may be purchased from:

Merck and Co., Inc.
Rahway, N.J.

Cost:

Not available.

Sample Search/Output:

Not applicable.

METADEX

Scope:

The METADEX (Metal Abstracts/Alloys Index) database, produced by the American Society for Metals (ASM) and The Metals Society (London), provides the most comprehensive coverage of international literature on the science of metallurgy. Included in this database are Review of Metal Literature (1966-67), Metals Abstracts (1968 to present), and, since 1974, Alloys Index. Metals Abstracts includes about 30,000 citations each year from about 1,100 primary journal sources. Alloys Index supplements Metals Abstracts by providing access to the citations through commercial, numerical, and compositional alloy designations; specific metallic systems; and intermetallic compounds found within these systems. In addition to specialized topics (including specific alloy designations, intermetallic compounds, and metallurgical systems), six basic categories of metallurgy are covered.

- Materials
- Processes
- Properties
- Products
- Forms
- Influencing Factors

Access:

METADEX is available both in hard-copy and online through the DIALOG information retrieval system. For information about how to access DIALOG, consult Appendix A.

Cost:

The cost of conducting a search on METADEX is $80 per connect hour and $0.12 per citation.

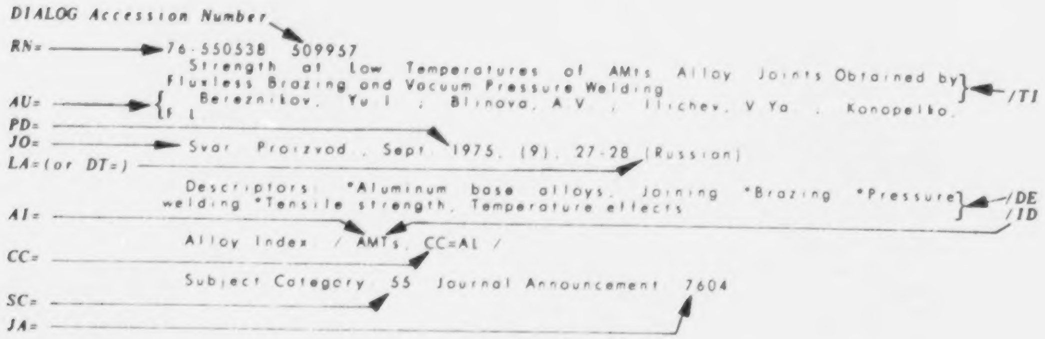
Sample Search/Output:

```
? BEGIN 32
          7jul77 8:37:38 User316
  $0.10 0.004 Hrs File1
          File32:METADEX 66-77/JUNE
          Set Items Description (+=OR;*=AND;-=NOT)
          --- ----- -----------------------------
? SELECT MARAGING STEELS
            1  1192 MARAGING STEELS

? SELECT CC=SAHM
            2   321 CC=SAHM  (CN=MARAGING STEELS)
? SELECT FATIGUE
            3  9449 FATIGUE
? COMBINE (1 OR 2) AND 3
            4   111  (1 OR 2) AND 3
? TYPE 4/6/1-2
1
77-720149  566585
  Fatigue and Fracture of an 18per cent Ni Maraging Steel Used for
Military Bridging.

2
77-311834  564644
  Fatigue-Strength Characteristics of Maraging Steel Containing Ni 18,
Co 8 and Mo 5per cent.

? PRINT 4/5/1-111
Printed4/5/1-111
? LOGOFF
          7jul77 8:40:33 User316
  $3.92  0.049 Hrs File32 3 Descriptors
 $13.32  111 Prints
 $17.24  Estimated Total Cost
LOGOFF  8:40:40
```



```
76-550538  509957
    Strength at Low Temperatures of AMts Alloy Joints Obtained by
Fluxless Brazing and Vacuum Pressure Welding
    Bereznikov, Yu I ; Blinova, A V ; Ilichev, V Ya ; Konopelko,
F L
    Svar Proizvod , Sept 1975, (9), 27-28 (Russian)
    Descriptors: *Aluminum base alloys, Joining *Brazing *Pressure
welding *Tensile strength, Temperature effects
    Alloy Index / AMTs, CC=AL /
    Subject Category 55 Journal Announcement 7604
```

MRIS ABSTRACTS

Scope:

MRIS ABSTRACTS, the database of the Maritime Research Information Service (MRIS), is operated by the Transportation Research Board, National Research Council, and is sponsored by the Maritime Administration of the U.S. Department of Commerce.

Abstracts are announced in the semi-annual publication MRIS Abstracts. Material is selected for its interest to naval architects, ship builders, ship operators, suppliers of port and waterway services, terminal operators, shippers, maritime training schools, maritime associations, manufacturers of maritime equipment, and other organizations.

MRIS ABSTRACTS cover maritime information in the following subject categories:

- Arctic and Cold Weather Operations
- Cargo and Materials Handling
- Corrosion, Fouling, and Protection
- Management
- Maritime Labor and Education
- Maritime Transportation
- Marketing
- Naval Architecture and Engineering
- Navigation, Communications, and Detection
- Pollution and Control
- Ports and Harbors
- Propulsion Machinery
- Safety and Damage Control
- Ship Building
- Ship Construction
- Ship Handling and Control Systems
- Ship Operation
- Strength of Materials and Structural Analysis
- Trade and Commerce
- Traffic Management

Access:

MRIS ABSTRACTS is available through the DIALOG information retrieval system. For information about how to access DIALOG, consult Appendix A.

Cost:

The cost of conducting a search on MRIS ABSTRACTS is $40 per connect hour and $0.10 per citation.

Sample Search/Output:

```
? BEGIN 63
          25sep78 8:21:49 User3331
  $0.27   0.006 Hrs File63
File63:MRIS ABSTRACTS 70-78/JUN
          Set Items Description (+=OR;*=AND;-=NOT)
          --- ----- ----------------------------
? SELECT HAZARDOUS(W)MATERIALS; SELECT HAZARDOUS(W)CHEMICALS
            1    152 HAZARDOUS(W)MATERIALS
            2     55 HAZARDOUS(W)CHEMICALS
? SELECT HAZARDOUS(W)CARGO; SELECT LNG; COMBINE 1-4/OR
            3     36 HAZARDOUS(W)CARGO
            4    386 LNG
            5    545  1-4/OR
? SELECT SAFETY(W)STANDARDS; SELECT SAFETY(W)REGULATIONS
            6     94 SAFETY(W)STANDARDS
            7     83 SAFETY(W)REGULATIONS
? COMBINE 5 AND (6 OR 7)
            8     38  5 AND (6 OR 7)
? TYPE 8/3/1-3
8/3/1
173986
  SHIPBOARD LNG MEASUREMENT AND CONTROL
  LeCrone, RC
  Foxboro/Trans-Sonics, Incorporated
  Society of Naval Architects and Marine Engineers (Editors)
  One World Trade Center, Suite 1369, New York, New York, 10048
  16 pp   77
  Availability: Society of Naval Architects and Marine Engineers

8/3/2
173619
  THE MOVEMENT OF CHEMICALS THROUGH PORT AREAS
  Clarkson, RJE
  Marichem 77 (Editors)
  Hamburg, West Germany
  17 pp   77
  Availability: Ship Research Institute of Norway

8/3/3
173275
  LEGISLATING FOR SAFETY
  Robinson, DW
  Royal Institution of Naval Architects, England (Editors)
  10 Upper Belgrave Street, London SW1X 8BQ, England
  Proceeding   77
  Availability: Royal Institution of Naval Architects, England

? PRINT 8/5/1-38
Printed8/5/1-38
? LOGOFF
          25sep78 8:24:35 User3331
  $2.12   0.047 Hrs File63 11 Descriptors
  $3.80   38 Prints
  $5.92   Estimated Total Cost
LOGOFF  8:24:38
```

Sample Search/Output (continued):

```
                 ——DIALOG Accession Number
   139919 <—
     SHIP OPERATIONS AND MAINTENANCE MANAGEMENT INFORMATION SYSTEM <———— /TI
AU=—>Czuchry, AJ; Benincusa, JJ; Engel, HE
     Dynamics  Research  Corporation;  Dynamics  Research  Corporation;  Dynamics
CS=—{Research Corporation
     North-Holland Publishing Company (Editors)
CG=—>52 Vanderbilt Avenue, New York, New York, 10017
     V5 Proceeding pp 457-464 2 Ref. —>76
PY=——
     Availability: North-Holland Publishing Company
     North-Holland Publishing Company
     Presents a concept for improving ship operations and maintenance through  the }
   use  of  a  maintenance  management information system with machinery condition }
   analysis.  The fundamental thesis is that critical failures can  be  predicted  }
   from  available  data before they occur,  thereby permitting corrective action. }
   before this concept can be implemented  additional  analyses  are  required  to }<-AB
   insure that accurate, timely failure predictions can be made to insure adequate }
   lead time for spares replenishment.  Proceedings of the 2nd International Ship  }
   Operation Automation Symposium, Washington, D.C., August 30-September 2,  1976. }
   Proceedings expected to be available about December 1976.                       }
     Descriptors: SHIP OPERATION; SHIP MAINTENANCE; MAINTENANCE DATA SYSTEMS;       }<-DE
   MACHINERY FAILURE MODES; FAILURE PREDICTION                                      }
SC=—>Section Heading Codes: 22
```

MSSS

Scope:

The Mass Spectral Search System (MSSS) is an online, interactive database available through the Chemical Information System (CIS). It contains over 30,000 searchable substances' spectra with references and over 60,000 bibliographic entries concerning mass spectrometry. Mass Spectral, mass/charge (M/E) values, and relative intensities, molecular weight, and molecular formula are included in the spectral subfile, as are Chemical Abstracts Service (CAS) Registry Numbers, CAS names, and a quality index rating for retrieved spectra. Mass Spectrometry bulletin bibliographic subfile includes author, year of publication, elements, and index terms. Pattern recognition-based searching capabilities may be applied to user input spectra or database extant spectra. Following are MSSS online capabilities:

Mass spectral data has been incorporated into MSSS from a variety of sources: government agencies, reference books and collections, industry, and individual researchers. Data are reviewed and a spectral Quality Index assigned to each spectrum prior to incorporation into MSSS.

Offline Complete Spectrum Search (BATCH): A version of the complete spectrum search program KB; accepts input data and holds it until the search can be run in nonprime time.

Element Search (EIE): Accepts any atomic symbol and retrieves all bulletin indexed references to that element.

SPEC: Allows examination of any complete mass spectrum.

General Index Search (INDEX): Searches the general index of the Mass Spectrometry Bulletin.

Complete Spectrum Search (KE): Permits the sequential comparison of unknown spectrum to each spectrum in the MSSS Database or the user's own private mass spectral files.

Calculation of Isotopic Incorporation Levels (LAB): Accepts all or part of the mass spectrum of an isotopically labelled compound together with the same part of the mass spectrum of the corresponding unlabelled compound and uses these data to determine the mole fractions of all the isotopically labelled species in the former.

Metastable Ion Calculator (META): Calculates the M/E values of the various metastable ions that correspond to a given parent/daughter pair.

Molecular Formula Search (MF): Permits the user to search for all mass spectra of compounds with a given complete molecular formula. (The option 'PF' permits searches for partial molecular formulas.)

Calculate Formulas from Accurate Masses (MOLFOR): Accepts an accurately determined M/E value and calculates all possible atomic compositions that have approximately the same accurate mass.

Molecular Weight Search (MW): Searches for spectra of compounds by specified molecular weight.

Plot a Spectrum on a Graphics Device (PLOT): Plots a spectrum as a bar graph.

Peaks and Complete Molecular Formulas (PMF): Searches for all spectra containing given peaks and corresponding compounds with a specific molecular formula.

Peaks and Molecular Weight (PMW): Searches for all compounds having a given molecular weight and with specific peaks in their mass spectra.

Spectrum Similarity Calculation (SIM): The spectrum dissimilarity calculation permits the user to establish the quantitative dissimilarity between any two mass spectra. The spectra may both be from the database, or one may be from the user's spectrum and the other a possible hit from the database.

Spectrum Retrieval (SPEC): Uses the ID number of a mass spectrum (provided as a result of any search through the database) to find and retrieve the complete spectrum in question.

Subject Search (SUBJECT): Allows a search through the cumulative subject index of the Mass Spectrometry Bulletin.

Access:

MSSS is available through the Chemical Information System (CIS). For information about how to access CIS, consult Appendix A.

Cost:

The cost of using MSSS is $36 per connect hour. In addition to the search costs, there is an annual $300 subscription fee, which is used to defray storage costs.

Sample Search/Output:

```
Option?  PBM

MSSS Probability - Based Matching (Version 2.05); July 1979 Edition (1.2)
Option?  LIMITS

Current limits:  A.  Concentration:     30
                 B.  Contamination:     99
Which one do you want to change (Both, None, A, B)?  NONE
```

```
Option?  ENTER

Input 2 Title lines
Line 1:KEPONE MIXTURE

Line 2:AUGUST 11, 1979

Enter M/E, Intensity

*178 35
*216 21
*218 22
*220 10
*235 35
*237 52
*239 16
*270 48
*272 98
*274 73
*276 18
*287 10
*355 10
*357 12
*0 0

Data OK (Y/N)? Y

Searching has begun
15000 spectra searched

 SI       REGN      QI     MW       MF                    NAME
.584   143-50-0    728    486    C10C1100                  1,3,4-Metheno-3
                                               H-cyclobut(cd)pentalen-2-one,
                                                 1,1a,3,3a,4,5,5,5a,5b,6-deca-
                                               chlorooctahydro- (8CI9CI)
                                                 Chlordecone
                                                 Chlordecone
                                                 Compound 1189
                                                 Decachloroketone

.147  2385-85-5    728    540    C10C112                   1,3,4-Metheno-1-
                                               H-cyclobuta(cd)pentalene, 1,la,
                                               2,2,3,3a,4,5,5,5a,5b,6-dodeca-
                                               chlorooctahydro - (8CI9CI)
                                                 CG-1283
                                                 Dechlorane Plus
                                                 Dechlorane
                                                 Dechlorane Plus

Another Search (Y/N) ? N
```

NFPA

Scope:

"A Table of Common Hazardous Chemicals," compiled by the American Chemical Society and the National Fire Prevention Association (NFPA) Committee on Hazardous Chemicals and Explosives, presents the most authoritative data available concerning hazardous substances. Substances are listed in order to make available information about hazardous properties and fire fighting phases to improve fire protection and prevention. If a chemical is omitted from the publication, it does not mean it is not hazardous. A chemical must meet one or more of the following criteria in order to be included:

- A health hazard of 2 or higher (based on scale of 1-4; 4 the most hazardous)
- A reactivity rating of 1 or higher (based on scale of 1-4; 4 the most hazardous)
- Unusual storage or fire fighting problems
- Hazardous when contaminated with other chemicals

In this publication, the following specific types of information are provided for each chemical:

- Description
- Fire and explosion hazards
- Life hazard
- Fire fighting phases
- Usual shipping containers
- Storage
- Remarks

Access:

The manual may be purchased from NFPA, Boston, Massachusetts.

Cost:

The cost of the manual is $6.

Sample Search/Output:

Not applicable.

NIOSHTIC

Scope:

The NIOSHTIC database is an online, interactive, bibliographic database generated and maintained by the National Institute for Occupational Safety and Health Technical Information Center (NIOSHTIC) to support NIOSH interests in research and the documentation of recommended occupational safety standards.

The NIOSHTIC database contains over 70,000 document records concerning all aspects of occupational safety and health, including industrial hygiene, environmental health, industrial medicine, sampling methodology, analytical chemistry, environmental engineering, physiology, behavioral psychology, epidemiology, and many other fields. Records contain bibliographic citations, indexing terms, and abstracts. Approximately 75% of the documents referenced in the database are drawn from the open literature, the remainder originating as NIOSH-published documents and unpublished research reports.

Access:

To access NIOSHTIC, call Dr. Allen Susten, NIOSH, Cincinnati, Ohio (513) 684-6474.

Cost:

Not available.

Sample Search/Output:

Not available.

NOAA DATA BASES

Scope:

The National Oceanic and Atmospheric Adminstration's Environmental Science Information Center (ESIC) collects, analyzes, and disseminates information about the atmosphere, Earth, oceans, Sun, and space. The Environmental Data Index has been developed, and access to other databases obtained, to provide a "one-stop" service for computerized searching of references to NOAA's areas of interest. The service is carried out by the NOAA Environmental Data and Information Service. ESIC provides searches from:

- DIALOG
- ORBIT
- MEDLARS (National Library of Medicine)
- National Oceanographic Data Center
  - Ocean bottom photo file
  - Index of subsurface ocean measurements
  - Bathythermograph files
  - Aquaculture file
- FAO/UN Aquatic Sciences Bibliographic file
- Biological Abstracts
- Engineering Index
- ENVIROLINE, MEDLINE
- Oceanic Abstracts
- Pollution Abstracts

Access:

Searches can be requested in person, by telephone, or by submission of NOAA Form 24-21. NOAA personnel can contact any of the offices listed below; others should direct their requests to the first office listed below, except for ENDEX searches, which should be directed to the National Oceanographic Data Center.

Environmental Science Information Center
User Services Branch, D822
NOAA Library and Information Services Division
6009 Executive Boulevard
Rockville, MD 20852 Telephone: (301) 443-8330

Environmental Research Laboratories
Library Services, R51
325 Broadway
Boulder, CO 80302 Telephone, Commercial: (303) 499-1000
ext. 3271
FTS: 323-3271

National Oceanographic Data Center
Data Index Branch, D782
Room 276, Page Building #1
2001 Wisconsin Avenue, NW.
Washington, D.C. 20235 Telephone: (202) 634-7298

National Climatic Center
User Services Branch, D542x2
Federal Building
Asheville, NC 28801 Telephone, Commercial: (704) 258-2850 ext. 677
FTS: 672-0677

NOAA Library and Information Services Division
Environmental Science Information Center
Silver Spring Center, D8224
816 Gramax Building
8060 13th Street
Silver Spring, MD 20235 Telephone: (301) 427-7800

Northwest and Alaska Fisheries Center
Library
Kodiak Facility
P.O. Box 1638
Kodiak, AK 99615 Telephone, Commercial: (907) 487-4961
FTS: Dial 399-0150, ask operator for commercial number

Northeast Fisheries Center
Library
Woods Hole, MA 02543 Telephone: (617) 548-5123, ext. 60

Great Lakes Environmental Research Laboratory
Library
2300 Washtenaw Avenue
Ann Arbor, MI 48104 Telephone, Commercial: (313) 769-7203
FTS: 378-2242

NOAA Library and Information Services Division
Environmental Science Information Center
Miami Center
15 Rickenbacker Causeway
Miami, FL 33146 Telephone, FTS: 350-1330

Center for Climatic and Environmental Assessment
Federal Building, Room 116
Columbia, MO 65201 Telephone: (314) 442-2271, ext. 3261

Southeast Fisheries Center
Beaufort Laboratory
Beaufort, NC 28516 Telephone: (919) 728-4595

Southwest Fisheries Center
Honolulu Laboratory
2570 Dole Street
P.O. Box 3830
Honolulu, HI 96812 Telephone, FTS: 556-0220, ask for (808) 946-2181

Northwest and Alaska Fisheries Center
Auke Bay Fisheries Laboratory
P.O. Box 155
Auke Bay, AK 99821 Telephone: (907) 789-7231

National Ocean Survey
Physical Science Services Branch
Map Library and Information Service
Room 709, WSC#1
6001 Executive Boulevard
Rockville, MD 20852 Telephone: (301) 443-8031

National Ocean Survey
Pacific Marine Center
1801 Fairview Avenue East
Seattle, WA 98102 Telephone: (206) 442-7657

Cost:

One-Time Searches:

NOAA will provide computerized information retrieval services to the general public on subject areas relevant to NOAA's areas of interest, on a cost-recovery basis. For ease of billing, fixed prices have been determined for single searches of each database. These have been calculated for an average search based on 20 minutes of online searching time, 60 minutes of staff time, and 100 citations printed. Prices for other available databases will be furnished upon request from the User Services Branch, D822, NOAA Library and Information Services Division, 6009 Executive Boulevard, Rockville, MD 20852, telephone number (301) 443-8330.

Sample Search/Output:

Not available.

NOHS

Scope:

The National Occupational Hazard Survey (NOHS) was a two-year study, initiated in 1972, which intended to describe the health and safety conditions in the American work environment and, more specifically, to determine the extent of worker exposure to chemical and physical agents. The businesses participating in the survey were selected by the Bureau of Labor Statistics and consisted of approximately 4,750 establishments in 67 metropolitan areas throughout the United States. This sample was chosen to be representative of all non-agricultural businesses covered under the Occupational Safety and Health Act of 1970. Each of the selected business establishments was visited by a member of a professionally trained survey team, where the survey itself consisted of two major parts. In the first part, appropriate management personnel were interviewed, using as the basis of the interview a standard set of 50 questions regarding facility policies and conditions relevant to employee safety and health. In the second part, a walkthrough investigation of the facility was conducted. In this walkthrough potential hazards were noted, the occupational titles of the people exposed were coded, and the intended control procedures utilized in connection with the hazard were recorded. A three volume NIOSH publication, the National Occupational Hazard Survey, describes the survey itself (Volume I - Survey manual), and the subsequent database and retrieval system development (Volume II - Data Editing and Database Development), and provides tabular compilations of some of the database statistics (Volume III -Survey Analysis and Supplemental Tables).

Access:

Single copies of the published documents can be obtained by sending a self-addressed mailing label to:

Publications Dissemination
Division of Technical Services
NIOSH
4676 Columbia Parkway
Cincinnati, OH 45226

Reference: DHEW (NIOSH) Publication Nos.
74-127, 77-123, and 78-114

For additional information concerning the contents of this database contact:

Joseph Seta
Surveillance Branch (F3)
National Institute for Occupational
Safety and Health
4676 Columbia Parkway
Cincinnati, OH 45226 Telephone: (513) 684-2706

Cost:

Single copies of the NIOSH publication are available free from the above address.

Sample Search/Output:

Not applicable.

NSF-HCL

Scope:

The National Science Foundation Hazardous Chemicals List (NSF-HCL) lists organic compounds which may be of special interest with respect to possible environmental and/or health effects. The primary purpose of this list is to place in the hands of NSF and other interested organizations a list of compounds which could help guide future environmental and health research.

Access:

For a more detailed description of this project, see "Final Report of NSF Workshop Panel to Select Organic Compounds Hazardous to the Environment," October 1975. Two appendices in that report are of particular interest: Appendix IV A, where the original chemicals are ranked by release rate, and Appendix V, where the final list of 80 chemicals is ranked by order of interest.

An additional four volumes of information on this project are available through the National Technical Information Service (Research Program on Hazard Priority Ranking of Manufactured Chemicals, Phase II Final Report, SRI, ECU 3386).

Cost:

Not available.

Sample Search/Output:

Not available.

NSRDS

Scope:

Reliable reporting of physical and chemical properties related to toxic chemicals is essential to environmental assessment and chemical spill or waste regulation and management.

The National Standard Reference Data System (NSRDS) was established in 1963 as a means of coordinating, on a national scale, the production and dissemination of critically evaluated reference data in the physical sciences. Under the Standard Reference Data Act (Public Law 90-396), the National Bureau of Standards (NBS) of the U.S. Department of Commerce has the primary responsibility in the Federal Government for providing reliable scientific and technical reference data. The Office of Standard Reference Data of NBS coordinates a complex of data evaluation centers, located in university, industrial, and other Government laboratories as well as within the National Bureau of Standards, which are engaged in the compilation and critical evaluation of numerical data on physical and chemical properties retrieved from the world scientific literature.

The primary focus of the NSRDS is on well-defined physical and chemical properties of well-characterized materials or systems. An effort is made to assess the accuracy of data reported in the primary research literature and to prepare compilations of critically evaluated data which will serve as reliable and convenient reference sources for the scientific and technical community.

Publications:

- NSRDS publishes the Journal of Physical and Chemical Reference Data containing standard data developments.
- NSRDS/NBS publishes a series of data monographs which report NBS test results.
- NSRDS publishes data from other sources related to properties of chemicals. These include Russian translations.
- NSRDS publishes computer programs for data handling .
- NSRDS makes available programs on mag tape for data management.

Access:

The National Standard Reference Data System publications are available from a variety of sources, including the American Chemical Society (ACS); American Institute of Physics (AIP); the Superintendent of Documents, U.S. Government Printing Office (GPO); the National Technical Information Service (NTIS); the Office of Standard Reference Data (OSRD); as well as private publishers and societies.

Cost:

Not available.

Sample Search/Output:

Not available.

NTIS

Scope:

The National Technical Information Service (NTIS) database consists of government-sponsored research, development, and engineering reports, plus analyses, journal articles, and translations prepared by Federal agencies, their contractors or grantees. NTIS also covers Federally generated machine-readable files and software, as well as U.S. Government inventions available for licensing. It is the means through which unclassified, unlimited distribution reports are made available to the public.

The NTIS database includes material from both the "hard" and "soft" sciences, including topics of immediate broad interest, such as environmental pollution and control, energy conservation, technology transfer, health planning, societal problems, and urban regional development and planning. An outline of the subject coverage of this file is shown below:

- Administration
- Aeronautics and Aerodynamics
- Agriculture and Food
- Astronomy and Astrophysics
- Atmospheric Sciences
- Behavior and Society
- Biomedical Technology and Engineering
- Building Technology
- Business and Economics
- Chemistry
- Civil Engineering
- Communication
- Computers, Control and Information Theory
- Electrotechnology
- Energy
- Environmental Pollution and Control
- Health Planning
- Industrial and Mechanical Engineering
- Library and Information Sciences
- Materials Sciences
- Medicine and Biology
- Mathematical Sciences
- Military Sciences
- Natural Resources and Earth Sciences
- Navigation, Guidance and Control
- Nuclear Science and Technology
- Ocean Technology and Engineering
- Physics
- Space Technology
- Transportation
- Urban and Regional Technology

Access:

NTIS is available through the DIALOG and ORBIT information retrieval systems. For information about how to access DIALOG and ORBIT, consult Appendix A.

Cost:

The cost of conducting a search on NTIS is $35 per connect hour and $0.10 per citation.

Sample Search/Output:

```
SS 1 /C?
USER:
PHTHALATE AND ESTERS

PROG:
SS 1 PSTG (7)

SS 2 /C?
USER:
"PRINT 1

PROG:

-1-
AN   - PB-296 804/8SL
TI   - PHTHALATE ESTERS:  AMBIENT WATER QUALITY CRITERIA
OS   - ENVIRONMENTAL PROTECTION AGENCY, WASHINGTON, D.C. CRITERIA AND
       STANDARDS DIV.
PD   - 1978; 119p*
IS   - U7920
PR   - NTIS PRICES:  PC A06/MF A01

SS 2 /C?
USER:
PRINT 1 FULL

PROG:

-1-
AN   - PB-296 804/8SL
TI   - PHTHALATE ESTERS:  AMBIENT WATER QUALITY CRITERIA
OS   - ENVIRONMENTAL PROTECTION AGENCY, WASHINGTON, D.C. CRITERIA AND
       STANDARDS DIV.
PD   - 1978; 119p*
IS   - U7920
PR   - NTIS PRICES:  PC A06/MF A01
CC   - 6T; 6F; 8A; 57Y*; 57U; 68G; 68D; 47D
IT   - *WATER QUALITY; *TOXICOLOGY; *PHTHALATES; *ESTERS; TOXIC
       TOLERANCES; LABORATORY ANIMALS; CRITERIA; TOXICITY; WATER
       POLLUTION; AQUATIC BIOLOGY; MARINE BIOLOGY; FRESH WATER BIOLOGY;
       CONCENTRATION(COMPOSITION); EXPOSURE; CARCINOGENS; PUBLIC HEALTH;
       RISK; FOOD; EXPERIMENTAL DATA; PLANTS(BOTANY)
ST   - *TOXIC SUBSTANCES; *WATER POLLUTION EFFECTS(HUMANS); WATER
       POLLUTION EFFECTS(ANIMALS); WATER POLLUTION EFFECTS(PLANTS);
       ENVIRONMENTAL HEALTH; HEALTH RISKS; MAXIMUM PERMISSIBLE EXPOSURE;
       PHARMACOKINETICS; CLEAN WATER ACT; NTISEPAOWP
AB   - SECTION 304(A) OF THE CLEAN WATER ACT (33 U.S.C. 1314(A)),
       REQUIRES EPA TO PUBLISH AND PERIODICALLY UPDATE WATER QUALITY
       CRITERIA.  THESE CRITERIA ARE TO REFLECT THE LATEST SCIENTIFIC
       KNOWLEDGE ON THE IDENTIFIABLE EFFECTS OF POLLUTANTS ON PUBLIC
       HEALTH AND WELFARE, AQUATIC LIFE, AND RECREATION.  THIS REPORT
```

Sample Search/Output (continued):

```
PRESENTS WATER QUALITY CRITERIA FOR PHTHALATE ESTERS.  IT PRESENTS
CONCENTRATION CRITERIA FOR THE PROTECTION OF FRESH WATER AND
SALTWATER AQUATIC LIFE.  IT PRESENTS 'SAFE' CONCENTRATIONS FOR
HUMANS, AND IN THE CASE OF SUSPECT OR PROVEN CARCINOGENS, GIVES
VARIOUS LEVELS OF INCREMENTAL CANCER RISK.  A SECTION 304(A) WATER
QUALITY CRITERION IS A QUALITATIVE OR QUANTITATIVE ESTIMATE OF
THE CONCENTRATION OF A WATER CONSTITUENT OR POLLUTANT IN AMBIENT
WATERS WHICH, WHEN NOT EXCEEDED, WILL ENSURE A WATER QUALITY
SUFFICIENT TO PROTECT A SPECIFIED WATER USE.  UNDER THE ACT A
CRITERION IS A SCIENTIFIC ENTITY, BASED SOLELY ON DATA AND
SCIENTIFIC JUDGMENT.  IT DOES NOT REFLECT CONSIDERATIONS OF
ECONOMIC OR TECHNOLOGICAL FEASIBILITY NOR IS IT A WATER QUALITY
STANDARD AND IN ITSELF HAS NO REGULATORY EFFECT.
```

OA

Scope:

OCEANIC ABSTRACTS (OA) organizes and indexes worldwide technical literature on the seas of the world. It is designed to help researchers find out about published materials on many marine-related subjects.

Following are the major subject areas covered by this database.

- Biology/Fisheries
- Acoustics/Optics/Positioning/Remote Sensing
- Engineering/Materials
- Ships/Submersibles/Buoys
- Geology/Meterology/Oceanography
- Desalination/Pollution/Coastal Resources
- Diving/Offshore/Deep Sea
- Governmental/Legal

Access:

OA is available through the DIALOG and ORBIT information retrieval systems. For information about how to access DIALOG and ORBIT, consult Appendix A. The printed version of OA is available from Data Courier Inc., 620 S. 5th Street, Louisville, KY 40202, (502) 582-4111.

Cost:

The cost of conducting a search on OA is $75 per connect hour and $0.15 per citation.

Sample Search/Output:

```
? BEGIN 28
        6jul77 10:57:19 User316
  $0.11 0.002 Hrs File28
        File28:OCEANIC ABS 64-77/MAR
        Set Items Description (+=OR;*=AND;-=NOT)
        --- ----- ------------------------------
? SELECT BIBLIOGRAPH?
        1    352 BIBLIOGRAPH?
? SELECT ESTUAR?
        2   2036 ESTUAR?
? SELECT POLLUTION
        3   3259 POLLUTION
? COMBINE 1-3/AND
        4      9  1-3/AND
? SELECT JA=76?
        5   5000 JA=76?
? COMBINE 4 AND 5
        6      3  4 AND 5
? TYPE 6/2/1-3
1
76-05575
  A BIBLIOGRAPHY ON MARINE AND ESTUARINE PESTICIDE POLLUTION.
  MOULDER, D.S.; BARTLETT, C.A.   MARINE BIOLOGICAL ASS'N. OF THE UK,
MARINE  POLLUTION;  INFORMATION CENTRE, CITADEL HILL, PLYMOUTH PL12PB,
DEVON,; ENG.
  Lan: E    Publ.Yr: 76   Publ.Type: PLYMOUTH, ENG.: MARINE BIOLOGICAL
ASSOCIATION  OF  THE UNITED KINGDOM, MAR. MARINE POLLUTION INFORMATION
CENTRE, 1976. 104PP. PRICE: LBS. 5.
  Descriptors: MARINE POLLUTION, WATER POLLUTION, POLLUTANT DETECTION,
BIBLIOGRAPHIES,  PESTICIDES,  ESTUARIES,  LEVELS,  EFFECTS,  POLLUTANT
ANALYSIS, MARINE ORGANISMS, POLLUTANT ANALYSIS, MARINE ORGANISMS
2
76-02612
  WATER  POLLUTION IN ESTUARIES AND COASTAL ZONES (A BIBLIOGRAPHY WITH
ABSTRACTS).
  BROWN, R.J.    NTIS, 5285 PORT ROYAL RD., SPRINGFIELD, VA  22151
  Lan: E    Publ.Yr: 75   Publ.Type: GOVERNMENT REPORTS ANNOUNCEMENTS,
75(22): 113-114, OCT. 31, 1975.
  Descriptors:  SUMMARY  ONLY,  URBANIZATION,  BIBLIOGRAPHIES, COASTAL
ZONES,  ESTUARIES,  GOVERNMENT POLICIES, LEGISLATION, SEWAGE DISPOSAL,
WATER POLLUTION
3
76-01625
  ECOLOGY OF THE MARINE ENVIRONMENT (A BIBLIOGRAPHY WITH ABSTRACTS).
  HARRISON, E.A.    NTIS, 5285 PORT ROYAL RD., SPRINGFIELD, VA  22151
  Publ.Yr:  75    Publ.Type:  GOVERNMENT REPORTS ANNOUNCEMENTS, 75(8):
52, APR. 18, 1975.
  Descriptors:  POLLUTION EFFECTS, SUMMARY ONLY, ABSTRACT COLLECTIONS,
BIBLIOGRAPHIES,  ECOLOGY,  ESTUARIES, FISH, MICROORGANISMS, SHELLFISH,
WATER POLLUTION
? LOGOFF
        6jul77 11:00:00 User316
  $2.48 0.045 Hrs File28 4 Descriptors
LOGOFF 11:00:04
```

Sample Search/Output (continued):

```
DIALOG Accession Number ──┐                              Author Affiliation ──┐
                          ↓                                                   │
JA=75-0 ← 75-08612                                                            │
        DONNEES GEOMORPHOLOGIQUES SUR LA REGION DE FRESH CREEK, ILE ← /TI     │
      ANDROS(BAHAMA).                                                         │
AU= ──→ BOURROUILH, F.    UNIVERSITE DE PARIS VI, LABORATOIRE DE GEOLOGIE ←───┘
      HISTORIQUE; PLACE JUSSIEU, 75 PARIS 5E, FR.
LA= ──→ Lan: F     Publ.Yr: 74   Publ.Type: MARINE GEOLOGY, 16(4): 213-235,
      MAY 1974.                ↑
YR= ───────────────────────────┘
        Descriptors: ANDROS ISLAND, BAHAMIAN KARST, BLUE HOLES, DOLINES, ← /DE
      FRESH CREEK, BAHAMA ISLANDS, CARBONATES, COASTAL GEOMORPHOLOGY,
      TOPOGRAPHY
```

OCPDB

Scope:

The Organic Chemical Producers' Database (OCPDB) is an online interactive data resource designed to provide data on organic chemicals which the EPA may use to analyze and assess the U.S. organic chemical industry.

OCPDB contains production and toxicity data for over 600 commercial chemicals produced in the U.S. Data on production sites, production volumes, prices, production processes, feedstocks or raw materials, chemical intermediates, chemical emissions during production, toxicity hazard ratings, end uses, sales estimates, and chemical identification data including Wiswesser Line Notations (WLN) have been collected from the open literature and government reports.

In addition to online data retrieval, high level software programs are available to generate inputs in a batch mode.

The OCPDB is composed of chemical-related and producer-related data items. The 600 commercial chemicals in the database include the toxic pollutants for which EPA is establishing air and water quality criteria. In addition to other priority substances, information from the open literature and government reports are included from 1976 to the present.

Access:

This database is currently for EPA in-house use only. Prospective users may contact the following individual for access:

Dr. Atly Jefcoat, Chief
Organic Chemicals and Production Branch
Industrial Environmental Research Laboratory
Environmental Protection Agency
555 Ridge House
Cincinnati, Ohio 45268
(513) 684-4481

Cost:

Not available.

Sample Search/Output:

Not available.

OHM-TADS

Scope:

The Oil and Hazardous Materials Technical Assistance Data System (OHM-TADS) is designed to include all information pertinent to spill response efforts related to any material designated as an oil or hazardous material. As such, it includes a wide variety of physical, chemical, biological, toxicological, and commercial data. However, the greatest emphasis is placed on the deleterious effects these materials may have on water quality.

OHM-TADS is an automated information retrieval file designated to facilitate rapid retrievel of information on 1,000 oil and hazardous substances. Data files were constructed in such a manner that a systematic query program could prove of great value, both for online response to spill incidents, and for summary evaluation relating to enforcement and research activities.

The prime function of the files is to provide immediate feedback of information on hazardous substances to spill response team personnel. Individual segments contain both numerical data and interpretive comments. These can serve as background for decision-making and guidelines to initiate corrective action.

The completed files can also be used as a source of diverse information on hazardous substances as a whole, allowing research and enforcement authorities to assess areas where more work or stricter regulations are needed.

Data Files:

File No.	Mnemonic Segment Title	Coverage
1.	ACC	OHM-TADS Accession Number: A unique, computer assigned, identifier for the data file.
2.	CAS	Chemical Abstracts Service Registry Number: A unique, international, identifier for material of interest.
3.	SIC	Standard Industrial Code: Industry-employed codes which can be used to identify manufacturers of material.
4.	MAT	Material Name: Generally, the common name for the materials.
5.	SYN	Synonyms: Alternate identifiers of similar isomers for which the data is valid.
6.	TRN	Company Trade Names: Lists commercial trade names and the associate manufacturer whenever possible.

File No.	Mnemonic Segment Title	Coverage
7.	FML	Chemical Formula: Gives most common formula or describes nature of materials included in the general heading such as components of an industrial blend or mixture.
8.	SPC	Species in Mixture: Identifies typical product purity in cases of single constituent materials, or specific major components of heterogeneous mixtures.
9.	USS	Common Uses: Enumerates common uses of material.
10.	RAL	Rail (%): Percentage shipped by rail (estimate).
11.	BRG	Barge (%): Percentage shipped by barge (estimate).
12.	TRK	Truck (%): Percentage shipped by truck (estimate).
13.	PIP	Pipeline (%): Percentage shipped by pipeline (estimate).
14.	CON	Containers: Lists type of shipping containers normally used or required by law. Typical shipment size when available.
15.	STO	General Storage Procedures: Relates to precautions to be taken when storing the material. Rationale for these measures varies from safety considerations to precautions designed to prevent degradation of the materials.
16.	HND	General Handling Procedures: States the precautions to be taken when handling the material. Information relates to both safety considerations and practices designed to prevent degradation of the material.
17.	PRD	Production Sites: Lists major producers and their plant locations.
18.	HYD	Hydrolysis Product of: Lists hazardous materials which decompose to the material of reference when contacted with water.
19.	ADD	Additive (%): Lists typical stabilizers and inhibitors added to the base material.
20.	BIN	Binary Reactants: Lists materials known to react when put in contact with the material of reference.

File No.	Mnemonic Segment Title	Coverage
21.	COR	Corrosiveness: General statement of observations on corrosive action to materials commonly used for packaging or equipment that might be required at a spill site.
22.	SGM	Synergistic Materials: Lists other materials and water quality parameters whose presence can increase the toxicity of the material of interest.
23.	ANT	Antagonistic Materials: Lists other materials and water quality parameters whose presence can reduce the toxicity of the material of interest.
24.	FDL	Field Detection Techniques, Limit (ppm): A three part segment listing potential field detection techniques, the lower sensitivity limit, and the literature reference where more data can be obtained. Field test generally refers to any gross identification method that can be used at the spill site without elaborate or non-portable equipment. It normally assumes that the material or the chemical class has been identified so that general tests for aldehydes or phenols, etc. are applicable. The two major types of tests listed are inorganic colorimetric reactions and organic spot tests.
25.	LDL	Laboratory Detection Techniques, Limit (ppm): Follows format of previous segment for specific tests that can be used for positive identification of material. These tests are generally reliant on sophisticated laboratory analysis equipment, such as atomic absorption units and gas chromatographs.
26.	STD	Standard Codes: Enumerates the National Fire Protection Association (NFPA) codes for materials as well as pertinent transportation codes.
27.	FLM	Flammability: Summarizes potential for fire at a spill site. Uses the NFPA ranking system described by one of the following modifiers.
28.	LFL	Lower Flammability Limit (%): Listed value is % of material in air which is the lower limit of flammability.
29.	UFL	Upper Flammability Limit (%): Listed value is % of material in air which is the upper limit of flammability.

File No.	Mnemonic Segment Title	Coverage
30.	TCP	Toxic Combustion Products: Occasionally lists specific materials or classes of materials released when compound of concern is burned or heated to decomposition.
31.	EXT	Extinguishing Methods: Notes fire fighting techniques and outlines unique precautions to be taken if any.
32.	FLP	Flash Point (°C): Listed open cup value when available, otherwise closed cup.
33.	AIP	Auto Ignition Point (°C): Listed value at which auto ignition occurs in the presence of adequate air.
34.	EXP	Explosiveness: Summarizes potential for violent rupture or vigorous reaction at a spill site.
35.	LEL	Lower Explosive Limit (%): Listed value is % of material in air which is the lower explosive limit.
36.	UEL	Upper Explosive Limit (%): Listed value is % of material in air which is the upper explosive limit.
37.	MLT	Melting Point (°C): Accepted value under standard conditions unless otherwise noted below in segment 38.
38.	MTC	Melting Characteristics: Decomposes, ignites, etc.
39.	BLP	Boiling Point (°C): Accepted value under standard conditions unless noted below in segment 40.
40.	BOC	Boiling Characteristics: Reduced pressure, etc.
41.	SOL	Solubility (ppm 25°C): Typically the listed value for standard reference conditions.
42.	SLC	Solubility Characteristics: Slightly and moderately are used when a specific value is not given.
43.	SPG	Specific Gravity: Listed value for material in the state it is most often shipped. For materials whose boiling point is near ambient temperatures, the liquid state was usually referenced.
44.	VPN	Vapor Pressure (mm Hg): The pressure characteristic (at any given temperature) of a vapor in equilibrium with its liquid or solid form.

File No.	Mnemonic Segment Title	Coverage
45.	VPT	Vapor Pressure Text: Indicates conditions under which measurement is made.
46.	VDN	Vapor Density: A value derived by dividing the mass of the vapor by its volume and measuring at a specific temperature. A value < 1 indicates that the vapor is lighter than air, > 1 is heavier than air and will give the appearance of a fog, hugging the ground.
47.	VDT	Vapor Density Text: Indicates temperature and any other conditions under which measurement is made.
48.	BOX	Biochemical Oxygen Demand (BOD lb/lb): Describes relative oxygen requirements of wastewaters, effluents, and polluted waters. Lists biochemical oxygen demand of pure substance on a lb/lb, or % of theoretical demand basis.
49.	BOD	Biochemical Oxygen Demand Text: Displays same information listed in segment 48 and includes duration of the test and source of information.
50.	PER	Persistency: Interprets BOD and chemical data to estimate material life span in a free aquatic system. When possible degradation products are specified.
51.	PFA	Potential for Accumulation: Recounts data on ability of various organisms to accumulate a material and the specific organs in which concentration is most pronounced.
52.	FOO	Food Chain Concentration Potential: Indicates potential for material to be concentrated to toxic levels while it is passed up the food chain. Where possible, data is given on findings in predatory species.
53.	EDF	Etiological Potential: Enumerates diseases and ailments initiated or accelerated by exposure to the material of interest.
54.	CAG	Carcinogenicity: Relates results of work directed to isolating carcinoma in test animals. Human data is used when available.
55.	MUT	Mutagenicity: Cites finding of tests for mutagenicity.
56.	TER	Teratogenicity: Cites finding of tests for teratogenicity.

File No.	Mnemonic Segment Title	Coverage
57.	FTX	Freshwater Toxicity Number (ppm): This segment indicates the concentration in parts per million at which test results were reported.
58.	FTB	Freshwater Toxicity Tests: Column 1-Concentration in ppm at which test results were reported. Column 2-Time of exposure expressed in hours. Column 3-Species tested, usually a common name. Column 4-Effect on organism tested often given as TLm or LD50. Column 5-Test environment, includes data on water quality and other controlled conditions. Column 6-Source of information.
59.	CAT	Chronic Aquatic Toxicity Limits (ppm): Maximum level in ppm found to be safe for extended exposure of fish to the material of interest.
60.	CAR	Reference for Chronic Aquatic Toxicity: Source of information.
61.	STX	Salt Water Toxicity: Indicates toxicity to estuarine or marine animals in parts per million.
62.	STB	Salt Water Toxicity Text: Follows same general format as segment 58.
63.	ATX	Animal Toxicity: Displays doses reported in milligrams of material per milligram of body weight of the test animal (unless otherwise noted).
64.	ATB	Animal Toxicity Text: Column 1-Doses in mg of material per mg body weight of test animal. Column 2-Time of exposure. Column 3-Species, lists animal of reference-typically lab animals-rats, guinea pigs, mice, pigs, dogs, and monkeys. Column 4-Parameter, description of exposure. Terms indicate whether dose caused death or other toxic effects, and whether it was administered as a lethal concentration, or toxic concentration in the inhaled air. Column 5-Route, lists mode of application. Column 6-Reference source of data.

File No.	Mnemonic Segment Title	Coverage
65.	ATL	Chronic Animal Toxicity Limits (ppm): Maximum level reported in ppm thought to be the threshold for extended use on livestock.
66.	ATR	Reference for Chronic Animal Toxicity Limits: Source of information.
67.	LVN	Livestock Toxicity (ppm): Lists recommended or safe levels of concentration in ppm for use on livestock.
68.	LVR	Reference for Livestock: Source of information.
69.	WAN	Acute Waterfowl Toxicity (ppm): Concentration in ppm considered to be hazardous to waterfowl upon acute exposure.
70.	WAR	Reference for Acute Waterfowl Toxicity: Source of information.
71.	CWF	Chronic Waterfowl Toxicity Limits (ppm): Concentration in ppm considered to be maximum permissible in water inhabited by waterfowl.
72.	CWR	Reference for Chronic Waterfowl Toxicity: Source of information.
73.	AQN	Aquatic Plants (ppm): Concentration in ppm found to be injurious to aquatic flora listed.
74.	AQR	Reference for Aquatic Plants: Source of information.
75.	IRN	Irrigable Plants (ppm): Concentration expressed in ppm found to be injurious to crop listed.
76.	IRR	Reference for Irrigable Plants: Source of information.
77.	CPT	Chronic Plant Toxicity Limits (ppm): Threshold level expressed in ppm for extended use as irrigation water.
78.	CPN	Reference for Chronic Plant Toxicity Limits: Source of information.
79.	TRT	Major Species Threatened: Spotlights individual species especially susceptible to the material of interest.
80.	TIC	Taste Imparting Characteristics (ppm): Level in ppm at which material will impart a taste to the flesh of fish living in the affected waters.

File No.	Mnemonic Segment Title	Coverage
81.	TIR	Reference for Taste Imparting Characteristics: Source of information.
82.	INH	Inhalation Limit (Value): Generally the accepted threshold limit value (TLV) which is that level acceptable for industrial exposure over an eight hour period. May sometimes be the LC50 for inhalation.
83.	INT	Inhalation Limit (Text): Units and source of information for the above segment.
84.	IRL	Irritation Levels (Value): Level at which skin and mucous membrane irritation occurs.
85.	IRT	Irritation Levels (Text): Reference and explanatory comments for above segment.
86.	DRC	Direct Contact: Summary statement indicating corrosiveness or irritation value of material in direct contact with skin, mucous membranes, or eyes.
87.	JNS	General Sensation: Designed to identify some of the reactions people might have (symptoms and effect on body) when exposed to the designated material, sensation upon breathing the vapors, vapor concentration levels at which noticeable reactions occur, warning properties, and miscellaneous toxicological observations.
88.	LOT	Lower Odor Threshold (ppm): Listed value in ppm.
89.	LOR	Lower Odor Threshold Reference: Source of information.
90.	MOT	Medium Odor Threshold (ppm): Listed value in ppm.
91.	MOR	Medium Odor Threshold Reference: Source of information.
92.	UOT	Upper Odor Threshold (ppm): Listed value in ppm.
93.	UOR	Upper Odor Threshold Reference: Source of information.
94.	LTT	Lower Taste Threshold (ppm): Listed value in ppm.

File No.	Mnemonic Segment Title	Coverage
95.	LTR	Lower Taste Threshold Reference: Source of information.
96.	MTT	Medium Taste Threshold (ppm): Listed value in ppm.
97.	MTR	Medium Taste Threshold Reference: Source of information.
98.	UTT	Upper Taste Threshold (ppm): Listed value in ppm.
99.	UTR	Upper Taste Threshold Reference: Source of information.
100.	DHI	Direct Human Ingestion (mg/kgwt): Notes toxic dose levels via human consumption in milligrams toxicant per kilogram body weight.
101.	DHR	Reference for Direct Human Ingestion: Source of information.
102.	DRK	Recommended Drinking Water Limits (ppm): Cites Public Health Service Drinking Water Standards whenever available.
103.	DRR	Reference for Recommended Drinking Water Limits: Source of information.
104.	BCE	Body Contact Exposure (ppm): States acute contact threshold limits in water where available.
105.	BCR	Reference for Body Contact Exposure: Source of information.
106.	PHC	Prolonged Human Contact (ppm): States safe level for bathing and swimming (prolonged) in parts per million.
107.	PHR	Reference for Prolonged Human Contact: Source of information.
108.	SAF	Personal Safety Precautions: Lists equipment to be employed when working in a spill area. Refers to disaster conditions and as such often presupposes fire or intense heat. Response teams should use their own judgment in deciding when stated precautions are no longer necessary. For most circumstances, eye protection, hard hats, and gloves are recommended.

File No.	Mnemonic Segment Title	Coverage
109.	AHL	Acute Hazard Level: Attempts to indicate level of hazard resulting from a spill. Relates to inhalation, ingestion and contact with material. Also lists specific water use hazard level such as fish toxicity and irrigation water toxicity.
110.	CHL	Chronic Hazard Level: Interprets chronic toxicological-biological hazard to life forms subjected to material of interest for extended periods of time.
111.	HEL	Degree of Hazard to Public Health: Interpretive summary of data from previous segments. This segment focuses on those toxicological chemical hazards directly affecting public health.
112.	AIR	Air Pollution: Summarizes degree of hazard to people in the vicinity of a spill. May refer to fumes, vapors, mists, or dusts of the material spilled or its combustion and/or decomposition products.
113.	ACT	Action Levels: An interpretive segment designed to aid in initiating response activities. Suggests notification of fire and air authority if material poses flammability or air hazard. Recommends alerting Civil Defense if explosion hazard exists. When explosion or severe air pollution exists, evacuation is indicated. If the material in question is highly corrosive or can be absorbed through the skin at toxic levels, affected waterways should be restricted from public access. When flammable materials are involved, ignition sources should be removed. Air contaminants require entry from up wind. If the spill involves solids, attempts should be made to prevent suspension of dusts in the air. If the material is one that will form a slick on water before dissolving, early attempts at containment will be quite beneficial. It is assumed that these actions will be complemented by general defensive responses. These include, notifying downstream water users of the spill, stopping all leaks or diverting their flow from reaching surface waters, and removing all bags, barrels and/or other containers that may still be leaking to the water body.

File No.	Mnemonic Segment Title	Coverage
114.	AMD	In Situ Amelioration: Lists potentially effective treatment methods which could be applied to the body of water for removal of the spilled material. Methods deemed to include hazards equal to or greater than that of the contaminant were systematically excluded. The term carbon refers to activated carbon in granular or powdered form.
115.	SHR	Beach and Shore Restoration: This segment is used mainly to indicate if material can be safely burned off beaches. Occasionally, a recommendation is made to wash affected area with a neutralizing solution.
116.	AVL	Availability of Countermeasures Material: Lists major materials required for countermeasures recommended in segment 113 (in situ amelioration) and possible local sources for those materials.
117.	DIS	Disposal Methods: Describes recommended techniques for disposing of spilled materials.
118.	DSN	Disposal Notification: Lists local authorities who should be notified before disposal methods in segment 116 are initiated.
119.	IFP	Industrial Fouling Potential: Relates potential problems from use of water contaminated by the material of interest. Generally refers to use in boiler feed and cooling water. Materials with flash points below 50°C are listed as potential rupture hazards when included in boiler feed or cooling water.
120.	WTP	Effect on Water Treatment Process: Describes potential interaction with typical water and wastewater treatment facilities. Most frequent entries concern effect of chlorination on the aesthetic properties of contaminated water, and the effect of high concentration on sewage organisms.
121.	WAT	Major Water Uses Threatened: Lists water uses imperiled by a spill and consequently indicates what type of downstream water users should be notified of the spill.

File No.	Mnemonic Segment Title	Coverage
122.	LOC	Probable Location and State of the Material: This is an interpretive segment of physical data designed to assist personnel in identifying the material spilled and its whereabouts. The data attempts to describe the physical appearance of the material as shipped (i.e., a dark red powder, etc.) and its probable location if the spill occurs in or near surface water.
123.	DRT	Soil Chemistry: A general description of the behavior and exchange capacity of various cations and ions in soil.
124.	HOH	Water Chemistry: A general description of the behavior of the material of interest in aqueous solution.
125.	COL	Color in Water: Identifies the color or appearance of concentrated solutions of the material of interest. In many cases, dilution and material coloring will minimize the visibility of the color listed here.
126.	DAT	Adequacy of Data: A simple classification was used to indicate the availability of data. Poor - indicates toxicological data is sparse if it exists at all. Fair - indicates toxicological data was found but no aquatic toxicities are listed. Moderate - indicates toxicological data was found along with some information on toxicity towards fish. Good - indicates both toxicological and aquatic toxicity data was found. Limited References - identifies those materials for which a complete literature survey was not run.

Access:

OHM-TADS is a component database of the Chemical Information System (CIS). The CIS is an operational network of chemical databases equipped with computer programs that permit interactive searching and retrieval from these databases.

The entire CIS has been developed by cooperating agencies of the U.S. Government. It is available in the private sector for use by the public on a fee-for-service basis. The CIS resides upon the computers of the Interactive Sciences Corporation (ISC) in Braintree, Mass., and is accessible worldwide through the GTE-Telenet telecommunications network. The integrated CIS was first made available to the public in June, 1978 on the ISC computer system.

To open a CIS account, or to obtain further information on the system, contact the CIS staff, Information Sciences Corp., Suite 301, 918 16th St., N.W., Washington, D.C. 20006, (Telephone 202-223-6503 or 800-424-9600).

Cost:

The cost of using OHM-TADS is $36 per connect hour. In addition to the search costs, there is an annual $300 subscription fee, which is used to defray storage costs.

Sample Search/Output:

In the example shown here, the CAS Registry number 56235 (for carbon tetrachloride) is entered and the OHM-TADS record for that material is stored in temporary file #1. The FORMAT command, a user option, is used to select CAS Registry number, material name, production sites, trade names, and uses; the TYPE command then causes these data pertaining to the compound to be printed. The following sample search identifies production sites, trade names, and common uses:

```
 Option? CAS/56235

 FILE:    1  Count:      1

 Option? FORMAT CAS,MAT,PRD,TRN,USS

 Option? TYPE 1/4

                FILE  1: ELEMENT    1
   (2) CAS REGISTRY NO:  56235
   (4) MATERIAL:  CARBON TETRACHLORIDE
   (17) PRODUCTION SITES:
   ALLIED CHEMICAL CORP., MOUNDSVILLE, W. VA.
   DIAMOND ALKALI CO., PAINESVILLE, OHIO
   DOW CHEMICAL CO., PITTSBURG, CALIF.; FREEPORT, TX, PLAQUEMINE, LA.
   FMC CORP., SO. CHARLESTON, W. VA.
   FRONTIER CHEMICAL CO., WICHITA, TEXAS
   PITTSBURGH PLATE GLASS CO., BARBERTON, OHIO
   STAUFFER CHEMICAL CO., NIAGARA FALLS, N.Y.; LOUISVILLE, KY.; LE
MOYNE, ALA.; DOMINGUEZ, CALIF.
   (6) TRADE NAME (COMPANY NAME):  NECATORINA, BENZINOFORM
   (9) COMMON USES:  FIRE EXTINGUISHER SOLVENT  FRAM FUMIGANT 2879 (
FLUORO-CARBONS
;
Option?

                                          Cost: 50 seconds, $0.50.
```

OHM-TADS is also very useful as a means of identifying chemical substances from their gross properties--such as smell and color--and it is used in this way in connection with emergency response efforts to chemical spills. In the example below, a chemical leaking from a battery and corroding a zinc floor was leaving a yellow deposit. This material was tentatively identified from these three observations as mercuric sulfate, and some of the hazardous properties of this material were printed out in order to help the spill response team with their attempts to deal safely with this chemical spill. The information retrieved permits a rapid and appropriate response to the problem caused by the spill.

```
Option? USS/BATTERIES AND COL/YELLOW AND COR/ZINC

File:  3  Count:      1

Option? FORMAT CLEAR

Option? FORMAT MAT,USS,COR,COL,DRK,DRR,SAF

Option? TYPE 3/4

              FILE  3: ELEMENT   1
  (4) MATERIAL:  $$$ MERCURIC SULFATE $$$
  (9) COMMON USES:  ELECTROLYTE FOR PRIMARY BATTERIES; EXTRACTING
  GOLD
  (21) CORROSIVENESS:  MAGNESIUM, ALUMINUM, ZINC, IRON, LEAD, COPPER
  (125) COLOR IN WATER:  YELLOW TO COLORLESS
  (102) REC DRINKING WATER LIMITS (PPM):  .002
  (103) REF FOR REC DRINKING WATER LIMITS:    AS HG, I327
  (108) PERSONAL SAFETY PRECAUTIONS:  PROTECT AGAINST BOTH INHALATION
  AND ABSORPTION THROUGH THE SKIN.  MUST WEAR PROTECTIVE CLOTHING,
  INCLUDING NIOSH-APPROVED RUBBER GLOVES AND BOOTS, SAFETY GOGGLES OR
  FACE MASK, HOODED SUIT, AND EITHER A RESPIRATOR WHOSE CANISTER IS
  SPECIFICALLY APPROVED FOR THIS MATERIAL, OR A SELF-CONTAINED
  BREATHING APPARATUS.  CARE MUST BE EXERCISED TO DECONTAMINATE
  FULLY OR DISPOSE OF ALL EQUIPMENT AFTER USE.

                                         Cost: 65 seconds, $0.65
```

PAPERCHEM

Scope:

This database is supplied by the Institute of Paper Chemistry. It covers many aspects of the pulp, paper, and board-manufacturing and utilizing industries including theoretical principles, raw materials, products, technologies and practices.

Access:

PAPERCHEM is available through the ORBIT information retrieval system. For information about how to access ORBIT, consult Appendix A.

Cost:

The cost of conducting a search on PAPERCHEM is $80 per connect hour and $0.10 per citation.

Sample Search/Output:

```
AN  - 47-3996
TI  - TIMBER:  MORE EFFECTIVE UTILIZATION
AU  - Cann, E.C.; Preston, S.B.
SO  - Science 191, no. 4228:  757-761 (Feb. 20, 1976).
DT  - J (Journal)
IT  - BUILDING BOARDS; CELLULOSE FIBERS; COMPOSITES; CONSTRUCTION MATERIALS;
      DISSOLVING PULPS; EFFICIENCY; ENERGY CONSUMPTION; ENGLISH; FIBER BOARDS;
      FLAKES; FOREST PRODUCTS; FULL TREE LOGGING; HARDBOARDS; INSULATING BOARDS;
      LAMINATED WOOD; LAMINATES; LOGGING; LUMBER; MARKET PULPS; MECHANICAL
      PROPERTIES; MOLDINGS; PANELS; PAPER; PAPER BOARDS; PARTICLE BOARDS; PLY
      WOOD; RAW MATERIALS; STIFFNESS; TREES; UTILIZATION; WHOLE TREES; WOOD
      PRODUCTS
AB  - The major products made from timber include structural wood products
      (lumber and rigid panels such as plywood, particle board, fiberboard,
      insulating board, and flakeboard) and fiber products (market and dissolving
      pulps, paper, paperboard, hardboard, molded pulp products, and products made
      from them).  Changes taking place in the utilization of wood as a structural
      material and as a source of fiber are discussed.  The trend of more complete
      utilization of the tree will continue.  The energy requirements for
      converting timber into structural and fiber products are discussed and the
      efficiency of raw material use in each segment of the forest products
      industry is assessed.  Recommendations are made for fulfilling the future
      raw materials needs of the forest products industries. (6 ref., 4 tab.)
```

PDSM

Scope:

Powder Diffraction Search Match (PDSM) is designed to search the data collected by the Joint Committee on Powder Diffraction Standards (JCPDS). Experimentally determined patterns can be compared to the database using d-spacings and intensities. The system takes into account possible mixtures and indicates how many lines are matched for each component. The database includes organics, inorganics, minerals and alloys. The PDSM is updated quarterly.

Access:

PDSM is available through the Chemical Information System (CIS). For information about how to access CIS, consult Appendix A.

Cost:

The cost of using PDSM is $60 per connect hour. In addition to the search costs, there is an annual $300 subscription fee, which is used to defray storage costs.

Sample Search/Output:

```
Option?  MATCH
Specify JCPDS Number (CR to end):  13-0012

Search Result:

JCPDS# USES%  SI    ML/X AT(%) IDENTITY
13-0012*  8  117.7  11/5  31    MN3 FE2 GE3 012
                                MANGANESE IRON GERMANIUM OXIDE

13-0012 at       30.6%        User Pattern        Residual
    D             I             D     I           Intensity
  4.9300          2 .........Missing
  3.2300          5 .........3.2220     4         None
  3.0100         15 .........2.9920    22         None
  2.7000         31 .........2.7080    21         None
  2.5800          6 .........Missing
  2.4700         14 .........2.4700    54         41**
  2.3700          2 .........Missing
  1.7700          1 .........Missing
  1.7450          4 .........1.7460    87         84**
  1.6750          8 .........1.6720    19         11
  1.6160         11 .........1.6140    21         10
  1.5300          1 .........Missing
  1.5090          3 .........1.5050    10          7
```

1.3510	4	1.3540	3	None
1.3190	5	1.3210	4	None
1.3000	1	1.3020	7	6**
1.2860	3	1.2869	11	8
1.1220	5	1.1240	14	9
1.1030	3	1.1000	3	None

**Obscured by coincident lines from other phases; did not contribute to the Match SI.

PHS-149

Scope:

The Survey of Compounds Which Have Been Tested for Carcinogenic Activity (Public Health Service Publication 149 (PHS-149)) is a series of eight books with data extracts from the scientific literature regarding experimental animal testing of chemical compounds. The animals were treated with various chemicals and examined for tumors (neoplasms) 30 days or more after initial treatment. Test protocols and results are given, but no critical evaluation of carcinogenicity is provided. The eight volumes cover the literature from the earliest carcinogenicity testing, pre-1947 to 1973, and the 1978 literature. They include tests on more than 4,000 compounds.

The books are arranged by generic chemical structural classes. Within each class, individual entries are arranged by preferred chemical name. Each entry reports data on the chemical tested, experimental animals, materials, administration protocol, tumors evidenced, and references to the literature where the test was reported.

Testing entries are indexed by the author of the article (in most cases the principal investigator), chemical name, route of administration, site of administration, animals species, tumor site, and vehicle. Cumulative indexes for the entire series, included in each edition, provide a cumulative bibliography, indexes for compound name, Chemical Abstracts Service (CAS) Registry number, molecular formula, and Wiswesser Line Notation (WLN).

Entries for animal tests in which more than one test compound was administered appear in the text section for each compound. Data from studies in which tumors were purposely induced by known carcinogens as baseline data are not included.

Structure and nomenclature data for substances in PHS-149 are referenced by and searchable in the Structural and Nomenclature Search System (SANSS) component of the EPA/NIH Chemical Information System (CIS).

Access:

The PHS-149 is sponsored by the National Cancer Institute. The contact point is:

National Cancer Institute
Landow Building, Room C337
7910 Woodmont Avenue
Bethesda, Maryland 20014
Dr. Herman F. Kraybill, Scientific Coordinator
for Environmental Cancer
(301) 496-1625

Copies of the books may be purchased through:

Superintendent of Documents
U.S. Government Printing Office
North Capitol Street, N.W.
Washington, D.C. 20402
(202) 783-3238

Cost:

Not available.

Sample Search/Output:

Not applicable.

PIRA

Scope:

PIRA is the online composite of four separate printed publications: Paper and Board Abstracts, Printing Abstracts, Packaging Abstracts, and Management and Marketing Abstracts. The first three provide abstracts of industry-specific scientific, technical, marketing, and management literature; the last covers the general literature and is not directed to any particular industry. PIRA is produced by The Research Association for the Paper and Board, Printing and Packaging Industries.

The database is divided into four principal subject areas: paper and board, printing, packaging, and management and marketing. A representative list of subjects is given below:

- Adhesives
- Binding
- Composition
- Education and Training
- Finishing
- Food Packaging
- Forecasting
- Graphic Arts
- Industrial Relations
- Inks
- Materials
- Machinery
- Occupational Safety
- Plastics Packaging
- Pollution
- Production
- Pulps
- Recycling
- Reprography
- Retailing
- Testing

Access:

PIRA is available through the DIALOG information retrieval system. For information about how to access DIALOG, consult Appendix A.

Cost:

The cost of conducting a search on PIRA is $55 per connect hour and $0.15 per citation.

Sample Search/Output:

```
? BEGIN 48
          18mar80 18:33:54 User3476
  $0.39   0.007 Hrs File48
File48:PIRA 75-79/DEC
(Copr. PIRA)
          Set Items Description (+=OR;*=AND;-=NOT)
          --- ----- ------------------------------
? SELECT PVC OR POLY(W)VINYL(W)CHLORIDE
                   877 PVC
                     1 POLY(W)VINYL(W)CHLORIDE
           1    878  PVC OR POLY(W)VINYL(W)CHLORIDE
? SELECT POLYVINYL(W)CHLORIDE OR POLYVINYLCHLORIDE
                    97 POLYVINYL(W)CHLORIDE
                     7 POLYVINYLCHLORIDE
           2    104  POLYVINYL(W)CHLORIDE OR POLYVINYLCHLORIDE
```

Sample Search/Output (continued):

```
? COMBINE 1 OR 2
            3   933  1 OR 2
? SELECT SOFT(W)DRINK? OR BEVERAGE?
                   189 SOFT(W)DRINK?
                  3304 BEVERAGE?
            4  3355  SOFT(W)DRINK? OR BEVERAGE?
? SELECT BOTTLE?
            5  1437 BOTTLE?
? COMBINE 3 AND 4 AND 5
            6    66  3 AND 4 AND 5
? TYPE 6/8/1-2
6/8/1
  047947
  PLASTIC WINE BOTTLES MAKE DEBUT IN BRITAIN
  Descriptors: Packaging special products-- Foods and beverages--
Beverages

6/8/2
  047865
  XACTICS BID FOR CARBONATED BEVERAGE BOTTLE MARKET
  Descriptors: Retail unit packages--  Plastics containers.  skin
and blister packs

? PRINT 6/5/1-66
Printed6/5/1-66
? LOGOFF
          18mar80 18:36:52 User3476
  $2.81  0.051 Hrs File48 11 Descriptors
  $9.90  66 Prints
 $12.71  Estimated Total Cost

LOGOFF 18:36:59
```

POISINDEX

Scope:

POISINDEX is designed to provide information for the emergency identification and therapeutic management of acute poisoning. Information in POISINDEX has been obtained from manufacturers, retailers, and published data. All Management file entries are edited and reviewed by a review board composed of practicing toxicologists, physicians, and pharmacists. It is available as a set of 140 microfiches.

The database is organized in accordance with six subset files:

- Management
- Product/Ingredient
- Plants
- Snakes
- Mushrooms
- Tablet and Capsule Identification

The Product/Ingredient file has over 160,000 alphabetical entries for chemical names, commercial brand and trade names, generic and common misspellings for commercial, publicly accessible products, chemical substances, living organisms, and biological agents. Each Product/Ingredient entry contains information regarding the composition or formulation of the substance and references to the Management file for suggested treatment. Management file entries contain detailed information on clinical effects, treatment, available forms, pharmacology, ranges of toxicity, laboratory methodologies and values, and references for specific types of toxicity. The Tablet and Capsule Identification file lists drug capsules and tablets by their imprint code (numbers and letters), colors, and other identifying characteristics. Ingredient compositions and references to Management entries are given.

POISINDEX also has indexes for the identification of plants, snakes and snake bites, and mushrooms.

All index references include microfiche number and frame numbers for the referenced item. No cross-references are used in the indexes. Each entry contains all available information.

Access:

POISINDEX is generated by the Rocky Mountain Poison Control Center, Denver, Colorado, and disseminated by Micromedex, Inc., Englewood, Colorado, on a subscription basis. It is available only in microfiche form. POISINDEX complete files are regenerated and reissued quarterly to ensure currency. It is available from:

Micromedex, Inc.
1750 South Shoshone Street
Englewood, Colorado 80110
(303) 781-7813

Cost:

A POISENDEX subscription costs $1,140 per year.

Sample Search Output:

Not available.

POLLUTION ABSTRACTS

Scope:

POLLUTION ABSTRACTS, corresponding to the hardcopy *Pollution Abstracts*, is a leading resource for references to environmentally related literature on pollution, its sources, and its control.

The following subjects are covered by the POLLUTION ABSTRACTS database:

- Air Pollution
- Environmental Quality
- Noise Pollution
- Pesticides
- Radiation
- Solid Wastes
- Water Pollution

Access:

POLLUTION ABSTRACTS is available through the DIALOG and ORBIT information retrieval systems. For information about how to access DIALOG and ORBIT, consult Appendix A.

Cost:

The cost of conducting a search on POLLUTION ABSTRACTS is $75 per connect hour and $0.15 per citation.

Sample Search/Output:

```
?  BEGIN 41
           15aug77 8; 26:39 User 316
   $0.08   0.003 Hrs File1
           File41 :POLLUTION ABS 70-77/APRIL
           Set Items Description (+ = OR; * = AND; = NOT)
           ----------------------------------------------
?  SELECT CARCINOGEN?;  SELECT CANCER?;  SELECT NEOPLAS?
             1   244 CARCINOGEN?
             2    74 CANCER?
             3     1 NEOPLAS?
?  COMBINE 1-3/OR
             4   283 1-3/OR
?  SELECT INDUSTR?;  SELECT EFFLUENT?;  SELECT WASTE?;  SELECT EMISSION?
             5  6852 INDUSTR?
             6  2478 EFFLUENT?
             7 12958 WASTE?
             8  4262 EMISSION?
```

Sample Search/Output (continued):

```
? COMBINE 5-8/OR
          9 19790  5-8/OR
? COMBINE 4 AND 9
         10    43  4 AND 9
? TYPE 10/6/1-3
1
77-02212
  Baseline levels of benzo(a)pyrene in Southern California mussels.

2
77-02124
  Study of the effect of asbestos waste piles on ambient air.

3
77-01996
  The environment and disease.

? PRINT 10/5
Printed10/5/1-43
? LOGOFF
         15aug77 8:28:36 User316
  $2.15  0.033 Hrs File41 7 Descriptors
  $6.45  43 Prints
  $8.60  Estimated Total Cost
LOGOFF  8:28:43
```

PREDICASTS MARKET ABSTRACTS

Scope:

Predicasts, Inc., abstracts all significant information appearing in thousands of newspapers, business magazines, government reports, trade journals, bank letters, and special reports throughout the world. The PREDICASTS MARKET ABSTRACTS database provides information on acquisitions, capacities, end uses, environment, foreign trade, market data, new products, production, regulations, and technology. Products and services covered include:

- Agriculture, Forestry, Fisheries
- Apparel and Related Products
- Chemicals and Allied Products
- Communications
- Construction
- Electric/Electronic Machinery and Equipment
- Financial Services
- Food and Kindred Products
- Furniture
- Governments
- Instruments and Related Products
- Leather and Products
- Medical and Health Services
- Membership Organizations
- Metals and Fabricated Metal Products
- Mining and Extractive Industries
- Ordnance
- Other Kinds of Manufacturing
- Paper and Allied Products
- Petroleum and Energy Products
- Printing and Publishing
- Regional Trade and International Groups
- Rubber and Allied Products
- Sciences
- Service Industries
- Stone, Clay and Glass Products
- Textile Mill Products
- Tobacco Products
- Transportation
- Transport Equipment
- Wholesale and Retail Trade
- Wood and Wood Products

Access:

PREDICASTS MARKET ABSTRACTS is available through the DIALOG information retrieval system. For information about how to access DIALOG, consult Appendix A.

Cost:

The cost of conducting a search on PREDICASTS MARKET ABSTRACTS is $90 per connect hour and $0.20 (for subscribers) per citation.

Sample Search/Output:

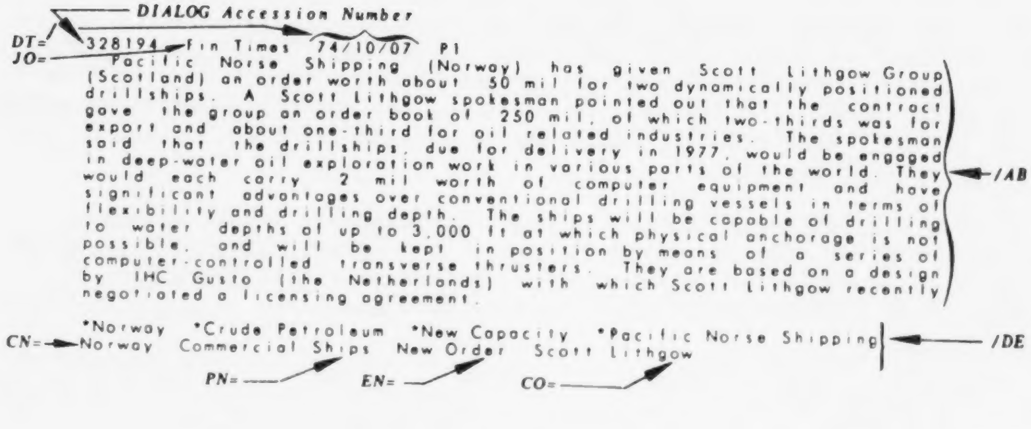
```
? BEGIN 16
        28apr77 13:26:36 User316
  $0.27  0.003 Hrs File16
        File16:PTS MARKET ABS 72-77/APR
        Set Items Description (+=OR;*=AND;-=NOT)
        --- ----- ------------------------------
? EXPAND POLYCHLORINATED BIPHENYL
Ref   Index-term              Type Items RT
E1    POLYCHEMIE---------------        2
E2    POLYCHLAL----------------        1
E3    POLYCHLORAL--------------        1
E4    POLYCHLORENE-------------        1
E5    POLYCHLORINATED----------      107
E6   -POLYCHLORINATED BIPHENYL
E7    POLYCHLORINATED BIPHENYL
        S  (PC=2866672)-------        69
E8    POLYCHLORO---------------        1
E9    POLYCHLOROBYPHENYLS-----         1
? EXPAND REGULATION
Ref   Index-term              Type Items RT
E1    REGULATE-----------------      139
E2    REGULATE...THE----------         1
E3    REGULATED---------------       149
E4    REGULATES---------------        36
E5    REGULATING--------------        94
E6   -REGULATION--------------       751
E7    REGULATION  (EC=930)----        64
E8    REGULATION NEC----------       113
? SELECT PC=2866672(L)EC=93
           1    23 PC=2866672(L)EC=93


? TYPE 1/2/1-2
1
371654  C&E News  77/01/24  P11  Chem Mkt R  77/01/24  P4,15  Jrl Comm
77/01/21  P5
  *United States  *Polychlorinated Biphenyls  *pollution regulatn
  United States  Environmental Protection Agency  pollution regulatn
2
370067  Chem Mkt R  76/12/13  P7
  *United States  *Polychlorinated Biphenyls  *pollution regulatn
  United States  Water Pollution  pollution regulatn
```

Sample Search/Output (continued):

```
? SELECT PC=2866672(L)PRODUCTION
          2    11 PC=2866672(L)PRODUCTION
? TYPE 2/2/1-2
1
373975  Elec News  77/01/03
  *United States  *Polychlorinated Biphenyls  *ends production
    *Sprague Electric
  United States  Polychlorinated Biphenyls  materials by use
  United States  Capacitors  materials use
2
373395  Europ Chem  77/01/01
  *United States  *Polychlorinated Biphenyls  *tariffs & quotas
  United States  Polychlorinated Biphenyls  ends production  Monsanto

? COMBINE 1 OR 2
          3   34  1 OR 2
? PRINT 3/7/1-34/CN/CO
Printed3/7/1-34/CN/CO
? LOGOFF
          28apr77 13:30:11 User316
  $5.40   0.060 Hrs File16 4 Descriptors
  $6.80   34 Prints
 $12.20   Estimated Total Cost
LOGOFF 13:30:17
```


DIALOG Accession Number
DT=
JO=
/AB
CN=
/DE
PN=
EN=
CO=

```
328194  Fin Times  74/10/07  P1
    Pacific Norse Shipping (Norway) has given Scott Lithgow Group
(Scotland) an order worth about 50 mil for two dynamically positioned
drillships. A Scott Lithgow spokesman pointed out that the contract
gave the group an order book of 250 mil, of which two-thirds was for
export and about one-third for oil related industries. The spokesman
said that the drillships, due for delivery in 1977, would be engaged
in deep-water oil exploration work in various parts of the world. They
would each carry 2 mil worth of computer equipment and have
significant advantages over conventional drilling vessels in terms of
flexibility and drilling depth. The ships will be capable of drilling
to water depths of up to 3,000 ft at which physical anchorage is not
possible, and will be kept in position by means of a series of
computer-controlled transverse thrusters. They are based on a design
by IHC Gusto (the Netherlands) with which Scott Lithgow recently
negotiated a licensing agreement.

  *Norway  *Crude Petroleum  *New Capacity  *Pacific Norse Shipping
  Norway  Commercial Ships  New Order  Scott Lithgow
```

RTECS

Scope:

The Registry of Toxic Effects of Chemical Substances (RTECS) is a file containing chemical toxicity data with source document references and citations to major standards, reviews, and regulations for over 34,000 chemical substances for which toxicity data or reviews have appeared in the publicly available literature, irrespective of publication date. For any chemical, only the most toxic values are retained in this routinely updated computer-produced file. The generation of the RTECS data file is sponsored by the National Institute for Occupational Safety and Health (NIOSH). This data is available as a handbook and as online databases through the National Library of Medicine (NLM) and the NIH-EPA Chemical Information System (CIS).

An updated version of RTECS is published annually in paperbound book form and issued quarterly on a subscription basis in microfiche by the U.S. Government Printing Office (GPO). The book was formerly published as the Toxic Substances List (TSL). Volume I contains a unified index of chemical synonyms and substance prime names, which references the main toxicity data entries in Volume II. Each record in Volume II contains: chemical identification data, Wiswesser Line Notations; toxicity data specifying species, route of exposure, toxic effects and dosage data for toxicity data; citations to major Federal standards and regulations; major toxicity reviews, such as the International Agency for Research on Cancer (IARC) reviews of carcinogenicity, NIOSH Criteria Documents, and the status of chemicals in the National Cancer Institute's carcinogenesis bioassay testing program.

The RTECS/CIS file is the version of the RTECS file implemented online as part of the NIH-EPA Chemical Information System (CIS), disseminated by Interactive Sciences Corporation. Specific chemical records may be located using Chemical Abstracts Service (CAS) Registry Number, NIOSH Number, toxicity data with source document citations, CAS 8th Collective Index nomenclature, and molecular formula.

Chemical structure and nomenclature information for substances in the RTECS file are searchable within the Structure and Nomenclature Search System (SANSS) component of the CIS (see SANSS Descriptive Catalog entry). Search (statement) results from SANSS may be combined with the search results from searches of the RTECS file itself. In addition, CAS Registry Numbers or RTECS accession numbers retrieved from SANSS may be used to retrieve, print, or display specific RTECS records.

RTECS/NLM is disseminated by the Medlars Management Group, National Library of Medicine. The Toxicology Information Program, National Library of Medicine is responsible for implementation, maintenance, and promotion of RTECS/NLM. This file is essentially the same as RTECS/CIS.

Access:

RTECS is available through both the Chemical Information System (CIS) and the National Library of Medicine MEDLARS database. For information about how to access CIS or MEDLARS, consult Appendix A. The printed version is available from the U.S. Government Printing Office, Washington, D.C. 20402.

Cost:

The cost of using RTECS on the Chemical Information System is $36 per connect hour. In addition to the search costs, there is an annual $300 subscription fee, which is used to defray all storage costs. An RTECS search on MEDLARS costs $15 per connect hour during prime time plus $0.10 for each page printed offline.

Sample Search/Output:

```
SS 1/C?                      SS 3/C?
USER:                        USER:
NEMAGON (SY)                 1 AND 2
PROG:                        PROG:
SS (1) PSTG (1)              SS (3) PSTG (1)

SS 2/C?                      SS 4/C?
USER:                        USER:
(IX) ORAL AND MOUSE          PRT TOXDATA INCLUDE CC
PROG:                        PROG:
SS (2) PSTG (5888)
```

```
   1
   SI - NIOSH/TX8750000
   N1 - PROPANE, 1,2-DIBROMO-3-CHLORO-
   RN - 96-12-8
   CC - AGRICULTURAL CHEMICAL
   CC - PRIMARY IRRITANT
   CC - CARCINOGEN-NEOPLASTIGEN
   CC - NEMATOCIDE
   CC - FUNGICIDE
   SO - NCITR* National Cancer Institute Carcinogenesis Technical Report
        Series, NCI-CG-TR-28, 78
 TDKW - ORAL; MOUSE; RODENTS; TDLo; 2400 mg/kg/40W-C; TOXIC EFFECTS CARCINOGENIC
        ORAL; RAT; RODENTS; TDLo; 3948 mg/kg/47W-C; TOXIC EFFECTS CARCINOGENIC
   SO - JNCIAM Journal of the National Cancer Institute, 51, 1993, 73
 TDKW - ORAL; MOUSE; RODENTS; TDLo; 30 gm/kg/42W-I; TOXIC EFFECTS CARCINOGENIC
   SO - GUCHAZ Guide to the Chemicals Used in Crop Protection, 6, 172, 73
 TDKW - ORAL; MOUSE; RODENTS; LD50; 257 mg/kg
```

SAFETY

Scope:

This database corresponds to Safety Science Abstract Journal. It covers general safety, environmental and ecological safety, medical safety, transportation safety, and industrial and occupational safety.

Access:

SAFETY is available through the ORBIT information retrieval system. For information about how to access ORBIT, consult Appendix A.

Cost:

The cost of conducting a search on SAFETY is $75 per connect hour and $0.15 per citation.

Sample Search/Output:

```
FILE SAFETY

PROG:
ELAPSED TIME ON FEDEX:  0.06 HRS.
YOU ARE NOW CONNECTED TO THE SAFETY DATABASE.
COPYRIGHT CAMBRIDGE SCIENTIFIC ABSTRACTS INC.
COVERS JUNE 1975 (VOL 1, NO 5/6) THRU VOL 6, NO 8/9 (8002).

SS  1/C?
USER:
CADMIUM AND SOIL

PROG:
SS  1 PSTG (34)

SS  2/C?
USER:
PRINT 1 FULL

PROG:

-1-
AN  -  87739H
TI  -  TRACE ELEMENTS IN SOIL AROUND THE FOUR CORNERS POWER PLANT
AU  -  WIERSMA, G.B.; CROCKETT, A.B.
OS  -  ENVIRON. MONITORING AND SUPPORT LAB., LAS VEGAS, NV.
SO  -  NTIS, SPRINGFIELD, VA., AUG. 1978, 24 PP.
LA  -  ENGLISH
AU  -  PB-288 389/OGA
```

Sample Search/Output (continued):

AB - NINETY-SIX SOIL SAMPLES WERE COLLECTED ON A RADIAL GRID EMPLOYING 16 EVENLY SPACED RADII AND 5 LOGARITHMICALLY SPACED CIRCLES, CONCENTRIC AROUND THE FOUR CORNERS POWER PLANT. THE SOIL SAMPLES WERE ANALYZED FOR ZINC, LEAD, COPPER, AND CADMIUM BY ATOMIC ABSORPTION SPECTROPHOTOMETRY. NO STATISTICAL RELATIONSHIP COULD BE DETECTED BETWEEN RESIDUE LEVELS FOR THE FOUR ELEMENTS AND INCREASING DISTANCE FROM THE POWER PLANT. A TWO-WAY ANALYSIS OF VARIANCE INDICATED NO SIGNIFICANT DIFFERENCE AMONG CIRCLES BUT THERE WAS A SIGNIFICANT DIFFERENCE AMONG RADII FOR ZINC, LEAD, AND COPPER WITH HIGHER RESIDUES OF THESE ELEMENTS CONSISTENTLY INDICATED TO THE WEST OF THE POWER PLANT. (REG) S15.20

SANSS

Scope:

The Structure and Nomenclature Search System (SANSS) is the heart of the NIH-EPA Chemical Information System (CIS). SANSS provides an online interactive capability for searching chemical substance databases in order to satisfy user needs for various structural and nonstructural chemical properties. SANSS provides structural and nomenclature information for over 110,000 chemical substances found in any CIS component file. SANSS permits the user to generate, modify, and/or display two-dimensional chemical structure diagrams of retrieved compounds. Structures may be used as search criteria to search the SANSS unified database for compounds having desired structural fragments. Once this search has been performed, iterative atom-by-atom, bond-by-bond substructure searches may be executed. Searching may also be performed using terms or fragments derived from nomenclature and molecular formulas, ring structure data, CIS fragment codes, number of atoms in a molecule, and molecular weights.

Output may include structural diagrams, Chemical Abstracts Service (CAS) Registry numbers, chemical nomenclature and synonyms, and a list of CIS files having information concerning the compound in question.

SANSS has several processing capabilities based on the use of connection tables to represent chemicals' two-dimensional structural characteristics. A connection table is a matrix listing of a molecule's nodes (numbered atoms), atomic symbol for that node, and the numbers of the other nodes to which it is interconnected. SANSS relies on encoded connection tables as the database upon which various algorithms are applied to perform structure display and substructure searching.

Additionally, several search packages are available to the user. These are not processing capabilities, but must be user selected and are invoked in SANSS to search the user-specified file in the Unifed DataBase System.

The user may also create and combine a temporary file containing reference to those substances in the database satisfying some query requirement or a combination of requirements.

Software Packages Available:

Name - Nomenclature Search (NPROBE): Allows for complete or partial (fragment) name search.

Functional Group - CIDS Key Search (SPROBE): Allows the user to search CIS UDB for substance containing a particular functional group or structure feature.

Nucleus - Ring Search (NPROBE): Allows for searching for specific rings or ring systems.

Fragment Search (FPROBE): Allows for searching for atom-centered fragments.

Substructure Search (SUBSS): Search option which permits atom-by-atom, bond-by-bond comparison between connection tables in the database and the connection table corresponding to the query structure.

Complete Structure Search (IDENT): Allows search for a total of full structure rather than a substructure.

Special Property Retrieval: General designation of miscellaneous types of characteristic searches. For the most part, these searches permit the identification of compounds for which certain quantifiable properties, structural or otherwise, fall within a permissible range. The various types of searches are:

Molecular Weight: to identify those substances in the database which have a specified molecular weight, or which fall within a certain molecular weight range.

Total Atom Count: to identify those substances in the database having either a specified total atom count, or a total atom count falling within a specified range.

Ring Count/Population: permits the identification of compounds containing specified combinations of total number of rings of various sizes present in the compound.

Access:

SANSS is available through the Chemical Information System (CIS). For information about how to access CIS, consult Appendix A.

Cost:

The cost of using SANSS is $60 per connect hour. In addition to the search costs, there is an annual $300 subscription fee, which is used to defray storage costs.

Sample Search/Output:

```
STRUCTURE AND NOMENCLATURE SEARCH SYSTEM
(VERSION 3.15/4.3) MARCH, 1980 ($60/HR)

LATEST NEWS FOR SANSS...
 24 APRIL 80; SUBNMR OPTION AGAIN FULLY OPERATIVE
```

Sample Search/Output (continued):

```
COMPLETE DATABASE SELECTED.
OPTION?  NPROBE

FRAGMENT OR WHOLE NAME SEARCH  (F/W)  (F)?W

SPECIFY NAME (CR TO EXIT):         BENZIDINE

FILE    1,       1 COMPOUNDS HAVING NAME        BENZIDINE
SPECIFY NAME  (CR TO EXIT):

OPTION?  SSHOW

FILE OR CAS NUMBER (CR TO EXIT):  1

ENTRY       1   CAS RN 92-87-5
CIS SOURCES OF INFORMATION

    CIS, EI MASS SPECTROMETRY
    CIS, CRREON 13 NMR SPECTROMETRY:  92-87-5.01
    NIOSH/CIS, RTECS:  DC96250
    JCPDS/CIS, POWDER DIFFRACTION PATTERNS:  90794

21 NON-CIS REFERENCE AVAILABLE
                                                         C12H12N2


(1,1' - BIPHENYL)-4,4'-DIAMINE (9CI)
BENZIDINE (8CI)
P-DIAMINODIPHENYL
P'P'-DIAMINOBIPHENYL
C.I.  AZOIC DIRZO COMPONENT 112
   7 MORE NAMES AVAILABLE
```

SCISEARCH

Scope:

SCISEARCH is a multidisciplinary index to the literature of science and technology prepared by the Institute for Scientific Information (ISI). It contains all the records published in the *Science Citation Index* (SCI) and additional records from the *Current Contents* series of publications that are not included in the printed version of SCI. SCISEARCH is distinguished by two important and unique characteristics. First, journals indexed are carefully selected on the basis of several criteria, including citation analysis, resulting in the inclusion of 90 percent of the world's significant scientific and technical literature. Second, citation indexing is provided, which allows retrieval of newly published articles through the subject relationships established by an author's reference to prior articles.

Subjects include the following areas:

- Acoustics
- Aeronautics
- Agriculture
- Astrophysics
- Behavioral Sciences
- Biochemistry
- Biology
- Biophysics
- Botany
- Cardiology
- Chemistry
- Dermatology
- Electronics
- Engineering
- Environmental Science
- Geology
- Mathematics
- Medicine
- Microbiology
- Pharmacology
- Physics
- Physiology
- Psychiatry
- Psychology
- Surgery
- Virology
- Zoology

Access:

SCISEARCH is available through the DIALOG information retrieval system. For information about how to access DIALOG, consult Appendix A.

Cost:

The cost of conducting a search on *SCISEARCH* is $30 (for subscribers) per connect hour and $0.10 per citation.

Sample Search/Output:

```
? BEGIN 34
        8jul77 11:25:02 User316
  $0.08 0.003 Hrs File1
        File34:SCISEARCH 74-77/WK18
        Set Items Description (+=OR;*=AND;-=NOT)
```

Sample Search/Output (continued):

```
? EXPAND CR=CRICK F, 1971?
Ref  Index-term              Type Items RT
E1   CR=CRICK F, 1971--------        1
E2   CR=CRICK F, 1971, P429--        1
E3   CR=CRICK F, 1971, V234,
       P25-----------------    147
E4   CR=CRICK F, 1971, V234,
       P26-----------------      1
E5   CR=CRICK F, 1971, V25,
       P429----------------      5
E6  -CR=CRICK F, 1971?-------
? SELECT E3, E4
          1   148 E3, E4
                   E6: CR=CRICK F, 1971?
? PRINT 1/2/1-148
Printed1/2/1-148
? LOGOFF
          8jul77 11:26:14 User316
  $1.40  0.020 Hrs File34 2 Descriptors
 $14.80  148 Prints
 $16.20  Estimated Total Cost
LOGOFF 11:26:20



? BEGIN 34
          8jul77 11:27:35 User316
  $0.14  0.002 Hrs File34
          File34:SCISEARCH 74-77/WK18
          Set Items Description (+=OR;*=AND;-=NOT)
          --- ----- ---------------------------
? SELECT LOS(W)ALAMOS/CS
           1  2875 LOS(W)ALAMOS/CS
? SELECT CO2; SELECT CARBON(W)DIOXIDE
           2  2279 CO2
           3  1144 CARBON(W)DIOZIDE
? SELECT LASER?
           4  9435 LASER?
? COMBINE 1 AND (2 OR 3) AND 4
           5    30  1 AND (2 OR 3) AND 4
? PRINT 5
Printed5/2/1-30
? LOGOFF
          8jul77 11:29:07 User316
  $1.82  0.026 Hrs File34 6 Descriptors
  $3.00  30 Prints
  $4.82  Estimated Total Cost
LOGOFF 11:29:14
```

Sample Search/Output (continued):

```
                                OATS Order   Number of References
DIALOG Accession Number         Number       Cited by Author
DT= 0584003 → BRIEF COMM  AA029   19 ← REFS
       ANALYSIS  OF  URINE  FOR  TRACE-ELEMENTS  BY ENERGY DISPERSIVE-X-RAY }
    FLUORESCENCE  SPECTROMETRY WITH A PRE-CONCENTRATING CHELATING RESIN     }←/TI
LA=→(EN)
AU=——→AGARWAL M, BENNETT RB, STUMP IG, DAURIA JM; → ANALYTICAL CHEMISTRY,
JO= Y47 N6, P924-927, 1975
       SIMON FRASER UNIV,DEPT CHEM/BURNABY/BRITISH COLUMBIA CANADA/←————————/CS
```

SPIN

Scope:

SEARCHABLE PHYSICS INFORMATION NOTICES (SPIN), covering all major areas of physics, provides the most current indexing and abstracting of the major American and Russian physics and astronomy journals. Journal articles cited are from the original and translation publications of the American Institute of Physics (AIP) and its member societies, as well as from other select American journals.

SPIN covers the major areas of physics, including:

- General Physics
- Elementary Particles
- Nuclear Physics
- Atomic and Molecular Physics
- Classical Physics
- Fluids, Plasmas and Electric Discharges
- Condensed Matter
- Materials Science
- Physical Chemistry
- Biophysics, Medical Physics, Biomedical Engineering
- Geophysics, Astronomy, Astrophysics

Access:

SPIN is available through the DIALOG information retrieval system. For information about how to access DIALOG and ORBIT, consult Appendix A.

Cost:

The cost of conducting a search on SPIN is $35 per connect hour and $0.10 per citation.

Sample Search/Output:

```
? BEGIN 62
          10Jul78 15:55:10 User3331
  $0.32  0.009 Hrs File62
File62:SPIN 75-78/JUN
          Set Items Description (+=OR;*=AND;-=NOT)
          --- ----- ---------------------------
? SELECT LASER?
            1  5955 LASER?
? SELECT ISOTOPE(W)SEPARATION; SELECT SEPARATION(2W)ISOTOPES
            2   120 ISOTOPE(W)SEPARATION
            3    22 SEPARATION(2W)ISOTOPES
? SELECT ISOTOPE(W)ENRICHMENT; SELECT ENRICHMENT(2W)ISOTOPE
            4     8 ISOTOPE(W)ENRICHMENT
            5     2 ENRICHMENT(2W)ISOTOPE
? SELECT NUCLEAR(W)ISOMERS; SELECT NUCLEAR(W)ISOTOPES
            6     3 NUCLEAR(W)ISOMERS
            7     0 NUCLEAR(W)ISOTOPES
? SELECT PX=28.60
            8    81 PX=28.60
```

Sample Search/Output (continued):

```
? COMBINE 2-8/OR
          9   153  2-8/OR
? COMBINE 1 AND 9
         10    91  1 AND 9
? TYPE 10/6/1-5
10/6/1
78061145
  Laser isotope separation of rare earth elements

10/6/2
78052313
  Measurement  of  the  cross  section  for  photoionization  of
ytterbium in the 3PSUB(1) excited state

10/6/3
78052116
  Emission  spectrum of the (nu)SUB(3)  band of SFSUB(6)  at 1780
degree K

10/6/4
78051804
  Depletion  optimization  and photon efficiency in laser isotope
separation of deuterium

10/6/5
78050073
  Selective processes induced by resonance laser radiation at the
phase boundary of two media


? PRINT 10/5/1-91
Printed10/5/1-91
? LOGOFF
          10Jul78 15:59:14 User3331
  $2.42   0.069 Hrs File62 14 Descriptors
  $9.10   91 Prints
 $11.52   Estimated Total Cost
LOGOFF 15:59:22
```

Sample Search/Output (continued):

```
DIALOG
Accession
Number→77101770
           Far-infrared photoconductivity of uniaxially stressed germanium ←—/TI
AU= ———→Kazanskii, A. G.: Richards, P. L.: Haller, E. E.
        {  Department of Physics, University of California,  and Materials
AA= →{ and Molecular Research Division,  Lawrence  Berkeley  Laboratory,
        { Berkeley, California 94720: Department of Instrument Techniques,
CO=      Lawrence Berkeley Laboratory, Berkeley, California 94720
    JN=→Appl. Phys. Lett.31(8),496-497 (15 OCT., 1977) CODEN: APPLA
MA= ———→CPM: 7710-C-0156
    WT=→WORK TYPE: FXPERIMENTAL
PX= ———→PACS: *72.40, 81.40.T, 85.60.G
           The   influence   of   uniaxial   stress   on   the   extrinsic  }
        photoconductivity   of   gallium-doped   germanium   has   been    }
        investigated.  It has been found that the long-wavelength  cutoff   }
        is  shifted  from  114  (mu)m  for zero stress to 200 (mu)m for a   }
        uniaxial stress of 6.6(times)10SUP(3)  kg/cmSUP(2)  along a .100.   }←/AB
        direction.   At  this  value  of  stress  the  responsivity  was    }
        (approximately)2(times)10SUP(4)   V/W   and   the   NEP   was       }
        (approximately)2(times)10SUP(-11) W/HzSUP(1/2) at 190 (mu)m.        }
           IDENTIFIERS:  GERMANIUM:   STRESSES:   FAR INFRARED RADIATION :  }
        INFRARED SPECTRA:  PHOTOCONDUCTIVITY:  GE SEMICONDUCTOR DETECTORS   }←/ID
        :  DOPED MATERIALS:  GALLIUM                                        }
```

SSIE

Scope:

The Smithsonian Science Information Exchange (SSIE) database contains summaries of research either in progress or completed in the past two years. The file consists of Notices of Research Projects (NRPs) that are usually available for retrieval from SSIE well before progress or final reports appear in the open literature. The database encompasses all fields of basic and applied research in the physical, social, engineering, and life sciences. Project summaries are indexed in depth by professional scientists and engineers using a hierarchical indexing system developed at SSIE. SSIE registers over 100,000 NRPs each year, two thirds of which are updates of continuing research and are reindexed as necessary to reflect shifts in emphasis and scope, thus keeping the file current with the latest developments, methodologies, and interim findings.

As a research-in-progress database, SSIE offers a unique non-bibliographic information resource. Some applications include: avoid research duplication, obtain information to support a proposal, locate sources of support, identify leads to the literature, stimulate ideas for planning, acquire data for forecasting, identify gaps in areas of investigation, locate individuals with expertise, and complement bibliographic data.

SSIE covers all of the physical, social, engineering, and life sciences including:

- Agricultural Sciences
- Behavioral Sciences
- Biological Sciences
- Chemistry and Chemical Engineering
- Earth Sciences
- Electronics
- Engineering
- Materials
- Mathematics
- Medical Sciences
- Physics
- Social Sciences and Economics

Access:

SSIE is available through the DIALOG and ORBIT information retrieval systems. For information about how to access DIALOG and ORBIT, consult Appendix A.

Cost:

The cost of conducting a search on SSIE is $90 per connect hour and $0.20 per citation.

Sample Search/Output:

```
? BEGIN 65
          25Jul78 16:21:22 User3331
  $0.90   0.010 Hrs File65
File65:SSIE CURRENT RESEARCH 75-78/JUN
 (Copr. SSIE Inc.)
          Set Items Description (+=OR;*=AND;-=NOT)
          --- ----- ------------------------------
? SELECT FUEL PRODUCED FROM WASTES
            1   114 FUEL PRODUCED FROM WASTES
? SELECT ALTERNATIVE(W)FUEL; SELECT ALTERNATIVE(W)FUELS
            2     7 ALTERNATIVE(W)FUEL
            3    96 ALTERNATIVE(W)FUELS
? SELECT SYNTHETIC(W)FUEL; SELECT SYNTHETIC(W)FUELS
            4    34 SYNTHETIC(W)FUEL
            5    39 SYNTHETIC(W)FUELS
? COMBINE 2-5/OR
            6   162  2-5/OR
? SELECT WASTE?; SELECT GARBAGE; SELECT SEWAGE
            7  5642 WASTE?
            8    19 GARBAGE
            9  1178 SEWAGE
? SELECT REFUSE; SELECT TRASH; COMBINE 7-11/OR
           10   130 REFUSE
           11    86 TRASH
           12  5809  7-11/OR
? COMBINE 1 OR (6 AND 12)
           13   146  1 OR (6 AND 12)
? TYPE 13/6/1-3
13/6/1
0260208   SSIE NO.: ZQA148137 2
  WASTE-DERIVED FUEL UTILIZATION MANUAL

13/6/2
0259329   SSIE NO.: GY   71674 1
  ALTERNATE ENERGY SOURCES FOR AGRICULTURAL APPLICATIONS

13/6/3
0259309   SSIE NO.: GY   71091 1
  ANAEROBIC  FERMENTATION OF AGRICULTURAL WASTES -  POTENTIAL
IMPROVEMENT AND IMPLEMENTATION

? PRINT 13/5/1-146
Printed13/5/1-146
? LOGOFF
          25Jul78 16:24:59 User3331
  $5.58   0.062 Hrs File65 14 Descriptors
 $29.20   146 Prints
 $34.76   Estimated Total Cost
LOGOFF 16:25:07
```

STORET

Scope:

STORET is an acronym used to identify the computerized database system maintained by EPA for the STOrage and RETrieval of data relating to the quality of the waterways within and contiguous to the United States. Within the STORET system, some 1,800 unique water quality parameters (a parameter is essentially the objective of a measurement such as the concentration of a particular substance in a particular medium) are defined. Approximately 80% of the 40 million individual observations available within the system pertain to approximately 200 of these parameters which deal with concentrations of conventional pollutants (BOD, N, P, etc.) and metals in water. A single observation represents a measurement of a single parameter at a specific location or station at a specific point in time. These observations are taken from more than 200,000 unique collection points located on essentially all U.S. rivers, lakes, streams, and other waterways.

The STORET system is fully computerized; it permits users throughout the country to enter observations into the database as well as to retrieve information from the database through remote terminals. A comprehensive range of retrieval capabilities, both in the statistical analysis of observations, and the reporting of the results of the analyses, is provided by STORET. Some of these services are available in an online mode of operation, others in a batch mode of operation.

STORET can be used for the following purposes:

- To detect changes in pollutants that could change ambient criteria/standards.
- To help promote water quality programs by substantiating the effectiveness of other similar programs.
- To help justify budget requests for water quality programs.
- To help cut sampling costs by coordinating efforts with other organizations.
- To provide a repository for data collection efforts.
- To help identify where monitoring efforts are needed, thereby determining where funds need to be allocated.
- To help design overall programs based upon the successes of others.
- To help complete water quality management basin plans.
- To help prepare fact sheets required for permit processing.
- To detect changes in pollutants that could change existing permits.

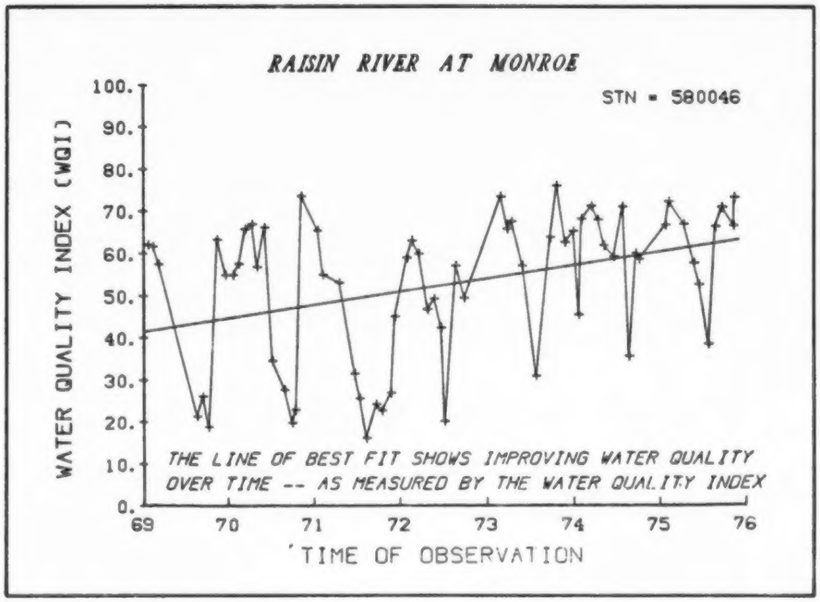
Access:

To determine eligibility to become a STORET user, contact STORET User Assistance in Washington, D.C. (202) 426-7792 or (FTS) 426-7792. Some of STORET's data and capabilities are available on UPGRADE.

Cost:

Not available.

Sample Search/Output:



SYNORG

Scope:

Synthetic Organic Chemicals: United States Production and Sales (SYNORG) is a single volume annual publication of the U.S. International Trade Commission. It receives data from approximately 800 producers, and reports domestic commercial production and sales of synthetic organic chemicals and the raw materials from which they are made. Fifteen sections, organized by chemical classes, deal with: tar and tar crudes; crude products from petroleum and natural gas for chemical conversion; cyclic intermediates; dyes; organic pigments; medicinal chemicals; flavor and perfume materials; plastics and resin material; rubber-processing chemicals; elastomers; plasticizers; surface-active agents; pesticides and related products; miscellaneous end-use chemicals and chemical products; and miscellaneous cyclic and acyclic chemicals.

For each of these groups, three separate tables are provided. The first of these lists the total production and sales figures for those chemicals for which there are three or more significant producers. The second table lists the manufacturers for all chemicals (in terms of a code), and the third table defines the manufacturers code. The Commission also publishes monthly statistics on 110 of the most significant of these chemicals.

A companion publication entitled "Imports of Benzenoid Chemicals and Products, 19xx", is also available from the Commission. For this publication, the imported benzenoids are categorized in seven groups as follows: intermediates, finished products, dyes and pigments, medicinals and pharmaceuticals, flavor and perfume, and all other finished products. Various tables are provided for various groups showing imported quantities by chemical, invoice values by country of origin, etc.

Through 1975, data were reported by producers for only those items where the volume of production exceeded 1,000 pounds or where the value of sales exceeded $1,000. Beginning in 1976, these limits were raised to 5,000 pounds and $5,000 for most chemicals and 50,000 pounds and $50,000 for plastics and resin materials; the 1,000 pounds and $1,000 limits were retained for organic pigments, medicinal chemicals, flavor and perfume materials, rubber processing chemicals, and elastomers.

Access:

Available through the U.S. Government Printing Office.

Cost:

Cost varies with year of publication.

Sample Search/Output:

Not applicable.

TDB

Scope:

The Toxicology Data Bank (TDB) is an online interactive retrieval system offered by the National Library of Medicine (NLM) as part of the MEDLARS family of databases. It provides reviewed information concerning the toxicity hazards, pharmacology, chemical identification, physical properties, environmental factors, manufacturing, shipping, usage, and other related information for chemical substances. Specific data elements include Chemical Abstracts Service Registry Number, synonyms, molecular formula and weight, human and animal toxicity, antidote and treatment, etc. Information has been extracted from some 80 reference textbooks, handbooks, monographs, and criteria documents. The data have been reviewed by a peer review group of scientists, from The National Institute of Health's Study Section in Toxicology, which is comprised of pharmacologists, toxicologists, chemists, etc. An output record may contain data values or detailed textual information.

TDB is searchable primarily using free text terms, prequalifying the terms with the desired search groupings. Only three fields have been indexed with Medical Subject Headings (MeSH) vocabulary. These three fields are human toxicity excerpts, animal toxicity excerpts, and laboratory methods excerpts.

Access:

TDB is available online through the MEDLARS information retrieval service from the National Library of Medicine, Bethesda, Maryland. Refer to Appendix A for MEDLARS access information.

Cost:

TDB searches cost $15 per prime time connect hour and $0.12 per page for offline prints.

Sample Search/Output:

```
SS 1 /C?
USER:
FILE TDB
PROG:
YOU ARE NOW CONNECTED TO THE TOXICOLOGY DATA BANK FILE.

SS 1 /C?
USER:
(EX) HAIRY AND ALL TONGUE:
PROG:
SS (1) PSTG (1)

SS 2 /C?
USER:
PRT EXS
PROG:

NM  - HYDROGEN PEROXIDE
ST  - 080178COMPLETE WITH PEER REVIEW COMMENTS INCORPORATED
HTEX- GOODMAN. PHARM BASIS THERAP 4TH ED    1047 THE CONTINUED USE OF
      HYDROGEN PEROXIDE SOLUTION AS A MOUTHWASH, EVEN IN HALF STRENGTH,
      MAY CAUSE HYPERATROPHIED FILIFORM PAPILLAE OF THE TONGUE (HAIRY
      TONGUE) BUT THESE DISAPPEAR AFTER DRUG IS DISCONTINUED.

SS 2 /C?
USER:
PRT 1 EXS, IXS
PROG:

NM  - HYDROGEN PEROXIDE
ST  - 080178COMPLETE WITH PEER REVIEW COMMENTS INCORPORATED
NM  - HYDROGEN PEROXIDE
ST  - 080178COMPLETE WITH PEER REVIEW COMMENTS INCORPORATED
HTEX- GOODMAN. PHARM BASIS THERAP 4TH ED    1047 THE CONTINUED USE OF
      HYDROGEN PEROXIDE SOLUTION AS A MOUTHWASH, EVEN IN HALF STRENGTH,
      MAY CAUSE HYPERATROPHIED FILIFORM PAPILLAE OF THE TONGUE (HAIRY
      TONGUE) BUT THESE DISAPPEAR AFTER DRUG IS DISCONTINUED.
HTKW- CHRONIC;;;ND;ORAL;MOUTH AND TEETH;TONGUE, HAIRY
```

TDMS

Scope:

The Toxicology Data Management Systems (TDMS) will maintain unprocessed data from toxicological experiments as well as serve as a management and collection agent for ongoing experiments. TDMS will allow users to:

- query the status of ongoing experiments;
- examine raw data from experiments;
- examine the protocols being used in different experiments; and
- determine if a given chemical is being experimented upon.

The information in TDMS is available through formatted reports or through the use of the query language processor. TDMS is composed of six subsystems, each of which deals with a different aspect of experimental data or procedure:

1. Compound Management System
2. Protocol Analysis System
3. Experiment Status System
4. Experiment Information System
5. Post Experiment Information System
6. Non-Animal Data System

The Compound Management System (CMS) will serve to collect compound information during the review process, prior to experimental acceptance.

The Protocol Analysis System (PAS) will allow the principal investigator to specify and tailor experimental protocol and information gathering regime. The database will contain the following information:

- compound name and identifiers, manufacturer information, and lot test analysis;
- name, site, and contract number of contractor handling experiment;
- materials requirements
  - feed (manufacturer, supplier, quantities)
  - animal husbandry (bedding, environment, etc.);
- number, sex, species, and strain of animals on experiment;
- animal room protocols, including:
  - feeding schedules
  - dosing methods and amounts
  - required data (clinical signs, weight, blood samples etc.)
  - sacrifice schedules;

- gross pathology protocols, e.g., what organs to look at and what abnormalties to look for; and
- microscopic pathology protocols.

The Experiment Status System (ESS) will allow review of the current status of any or all parts of an experiment, using preformatted reports.

The Experiment Information System (EIS) will handle all animal information collected while on experiment as defined in the experimental protocol. This includes:

- time series of animal weights;
- time series of clinical signs; and
- other recurrent measurements, observations, and good laboratory practice information.

The Post Experiment Information System (PEIS) will handle the information generated by gross pathological and microscopic pathological examination of the animals on experiment. The details of the information depend on the protocol, but some typical information is:

- Gross Pathology
    - Organ weights
    - Gross organ observations (size, color, shape, consistency, etc.)
    - Good laboratory practices data (balance used, who did weighing, etc.)
- Microscopic Pathology
    - Information on each organ (normal, missing, present but not looked at, etc.)
    - Pathological findings (grading, staging, typing, counting, tumor sites, etc.)
    - Slide information
    - Good laboratory practice (GLP's) information

The Non-Animal Data System (NADS) will collect environmental (chemical and biological) monitoring information during experiments.

Access:

TDMS is under consideration as a component database of the Chemical Substances Information Network (CSIN).

Cost:

Not available.

Sample Search/Output:

Not available.

TITUS

Scope:

TITUS provides worldwide coverage of the textile and allied industries. The following aspects of this subject are included in the database:

- Environmental protection and pollution control related to the textile industry;
- Biological effect of textiles related to health protection;
- Textile engineering;
- Textile industry management; and
- Analysis & testing of textile products.

Access:

TITUS is available through the ORBIT information retrieval system. For information about how to access ORBIT, consult Appendix A.

Cost:

The cost of conducting a search on TITUS is $75 per connect hour and $0.15 per citation.

Sample Search/Output:

```
AN  - 050734
TI  - PERPETUAL BOBBIN FOR LOCKSTITCH SEWING MACHINE
OTI - CANETTE PERPETUELLE POUR MACHINE A COUDRE A POINT NOUE
AU  - GOULET M.B.
SO  - FRANCE PAT. 2203899, (PRIORITY 20.10.72).
DT  - PATENT; DOCUMENTARY INFORMATION; BASIC LEVEL
LA  - FRENCH
IT  - *LOCKSTITCH; *SEWING MACHINE; *SEWING BOBBIN; CHARGING
AB  - SEWING BOBBIN FOR SEWING MACHINE WITH LOCKSTITCH. CONCEPTION OF
      SEWING BOBBIN AVOIDS CHARGING AND CHANGE OF SEWING BOBBIN.
```

TOXLINE/TOXBACK

Scope:

TOXLINE (Toxicology Information OnLine) is a database containing references to published toxicity studies, effects of environmental chemicals and pollutants, actions and adverse reactions of drugs, and related analytical methodology. TOXLINE is available online as part of the National Library of Medicine's MEDLARS system of databases.

Citations on a given subject may be retrieved from TOXLINE by entering the desired free text terms as they appear in titles, key words, and abstracts of articles. Chemical substances can be searched by entering their corresponding Chemical Abstracts Service (CAS) Registry Numbers, trade names, or synonyms, after consulting the CHEMLINE file. There is no controlled vocabulary governing the inclusion or exclusion of terms in TOXLINE. Terms may be entered singly or combined by means of the Boolean operators AND, OR and AND NOT. Searches may be limited to specific years of publication, secondary sources, or authors, since these are all searchable elements. Citations and abstracts may be printed online at the user's terminal, or offline and mailed to the user from NLM. Users may select a print format varying from a brief identification of author(s), title, and source to a complete listing of the bibliographic record, including the abstract.

As of May, 1979, the online file contained approximately 580,000 records, material published in secondary sources from 1974 forward. In TOXLINE are all of the EMIC and ETIC items, regardless of time coverage. Older information, approximately 380,000 records, is in TOXBACK (the TOXLINE backfile available through OFFSEARCH only). The HAYES, HAPAB, and TERA subfiles are only available in TOXBACK.

Data Files:

- Chemical-Biological Activities (CBAC)
- Radiation Biochemistry
- Sewage and Wastes
- Toxicity Bibliography (TOXBIB)
- Abstracts on Health Effects of Environmental Pollutants (HEEP)
- International Pharmaceutical Abstracts (IPA)
- Pesticide Abstracts (PESTAB)
- Environmental Mutagen Information Center file (EMIC)
- Environmental Teratology Information Center file (ETIC)
- Toxic Materials Information Center file (TMIC)
- Teratology (TERA)
- Hayes Pesticide Collection
- Toxicology/Epidemiology Research Projects (RPROJ)
- Smithsonian Science Information Exchange (SSIE)

Access:

TOXLINE is available through the MEDLARS bibliographic retrieval service from the National Library of Medicine (NLM). Both TOXLINE and TOXBACK are accessible at NLM only. For further information, call NLM at (800) 638-8480 or (301) 496-6193.

Cost:

TOXLINE searches cost $30 per connect hour prime time plus $0.18 per page printed offline.

Sample Search/Output:

```
5
SI - CA/086/115698B
TI - EVALUATION OF OCULAR IRRITATION IN THE RABBIT.  OBJECTIVE VERSUS
     SUBJECTIVE ASSESSMENT

6
SI - CA/085/172383Y
TI - TOXICITY OF DMSO TO BOVINE CORNEAL ENDOTHELIUM

SS 4 /C?
USER:
PRT 1 DL SKIP 2
PROG:

3
SI - CA/087/161535Q
AU - Laillier J
AU - Plazonnet B
AU - Le Douarec JC
AU - Gonin MJ
AA - MSD-Chibret es. Inst., Clermont-Ferrand, Fr.
TI - Evaluation of ocular irritation in the rabbit:  development of an
     objective method of studying eye irritation
SO - Proc. Eur. Soc. Toxicol.; VOL 17, ISS Predict. Chronic Toxic.
     Short Term Stud., Proc. Meet., 1975, 1976, 336-50
LA - Eng
JC - PESTD
AB - CBAC COPYRIGHT:  CHEM ABS Subjective evaluation of eye irritation,
     as in the Draize test, resulted in inter- and intra-lab. variations
     which may be obviated by using objective quant. procedures.  A
     method was developed in the rabbit which involved the detn. of dry
     tissue wt. as a measure of corneal and conjunctival edema and the
     estn. of dye diffusion as a measure of vascular leakage in the con-
     junctiva and the aq. humor.  Thirty-six compds., mainly organic
     solvents at least partially miscible with water and intended as
     vehicles for pharmacol. investigations were tested.  They were
     studied in single and repeated topical applications in the eye.  The
```

Sample Search/Output (continued):

solvents tested were ranked from low irritants (triacetin) to strong irritants (tetrahydrofurfuryl alc.) (102-76-1 Triacetin) (97-99-4 Tetrahydrofurfuryl alcohol). Some ophthalmic vehicles, such as borate buffer, were harmless to the eye. The method will detect even minor damage and can be used for the quant. assessment of ocular irritation. Among the compds. studied, 25% Solketal, 25% Tween 60, 25% polyethylene glycol 400, 25% ethylene glycol monomethyl ether, undiluted triacetin and tributyrin had no or only very minor effects on the eye. (100-79-8 Solketal) (9005-67-8 Tween 60) (25322-68-3 polyethylene glycol 400) (109-86-4 Ethylene glycol monomethyl ether) (60-01-5 tributyrin).

```
SS 2/C?
USER:
FILE TOX
PROG:
YOU ARE NOW CONNECTED TO THE TOXLINE FILE.

SS 1/C?
USER:
67-68-5 OR DMSO OR DIMETHYLSULFOXIDE OR DIMETHYLSULPHOXIDE OR
PROG:
CNT 1

USER:
SQ-9453 OR DIMETHYL AND SULFOXIDE OR DIMEHTYL AND SULPHOXIDE
PROG:
NP (SQ-9453)
SS (1) PSTG (1359)

SS 2/C?
USER:
(TW) ALL EYE# OR ALL CORNEA# OR ALL CATARACT:
PROG:
SS (2) PSTG (5217)

SS 3/C?
USER:
1 AND 2
PROG:
SS (3) PSTG (22)

SS 4/C?
USER:
PRT 6 SI, TI
PROG:
```

1/5

Sample Search/Output (continued):

```
1
SI - CA/090/092377N
TI - PREPARATION OF EYE DROPS UNDER FIELD CONDITIONS

2
SI - TOXBIB/78/006405
TI - OCULAR SIDE-EFFECTS OF DRUGS.  PP.  560-643

3
SI - CA/087/161535Q
TI - EVALUATION OF OCULAR IRRITATION IN THE RABBIT:  DEVELOPMENT OF AN
     OBJECTIVE METHOD OF STUDYING EYE IRRITATION

4
SI - TOXBIB/77/100078
TI - LACK OF PROOF OF INDUCTION OF SOMATIC RECOMBINATION AND MUTATION IN
     DROSOPHILA BY METHYL-2-BENZIMIDAZOLE CARBAMATE, DIMETHYL SULFOXIDE
     AND ACETIC ACID.
```

TOX-TIPS

Scope:

Toxicology Testing in Progress (TOX-TIPS) is a monthly publication sponsored by the Toxicology Information Subcommittee of the Department of Health and Human Services Committee to Coordinate Toxicology and Related Programs and is produced under the direction of the Toxicology Information Program at the National Library of Medicine (NLM).

TOX-TIPS is a product of the combined efforts of industrial, governmental, and academic organizations reporting on initiation of testing projects and epidemiology studies to determine toxicity.

The emphasis of the program is to provide an information exchange mechanism to avoid inadvertent duplication of expensive tests. Publication preference is given to long-term studies, although other projects are reported. For this publication, a long-term test is defined as one where the duration of the study is at least 10% of the animal's life expectancy. Hence, projects reporting 90-day and longer animal studies are published.

In TOX-TIPS, project descriptions are fully indexed by study parameters. Indexes by supporting and performing organizations and principal investigations are also included; all indexes are cumulated quarterly. References to completed studies, including NTP Bioassay Program reports, are accepted for index entry. In addition, TOX-TIPS carries selected references to articles from the recent literature on work related to the reported project. These bibliographic citations are retrieved from searches, conducted by NLM staff, of the National Library of Medicine's online databases.

Input to TOX-TIPS is submitted on Smithsonian Science Information Exchange (SSIE) Notice of Research Project forms included in each TOX-TIPS issue. Prompt reporting of new projects to the Editor of TOX-TIPS reduces the chances of duplication as material is usually printed in the first issue scheduled after its receipt. After the project description and related data are published, the information is relayed to SSIE for inclusion in that national database of information on research-in-progress.

Access:

TOX-TIPS may be ordered from:

National Technical Information Service (NTIS)
5285 Port Royal Road
Springfield, VA 22161

Cost:

The subscription cost is $35 per year within the North American Continent. All others are charged $70 per year.

Sample Search/Output:

Not applicable.

TRPD

Scope:

The Toxicology Research Projects Directory (TRPD) is a monthly publication sponsored by the Toxicology Information Subcommittee of the Department of Health and Human Services Committee to Coordinate Toxicology and Related Programs. It presents toxicology-related, on-going research project summaries reported to the Smithsonian Science Information Exchange (SSIE). TRPD emphasis is on studies related to the manifestations of the exposure of animals and humans to toxic substances. Projects are classified by toxic agents, research orientation and areas of environmental concern. Project summaries include project title, investigators with affiliations and addresses, summary abstract of the research project, funding organization, and dollar amount allotted to the project.

Access:

TRPD is available on a subscription basis from the National Technical Information Services, 5285 Port Royal Road, Springfield, VA 22161.

Cost:

The subscription cost is $100 per year within North America and $170 per year outside North America.

Sample Search/Output:

Not applicable.

TULSA

Scope:

TULSA is the online version of Petroleum Abstracts. Its coverage includes literature and patents related to the exploration, production, and development of oil and natural gas. Specifically, the database contains citations about:

- ecology and pollution;
- oil and gas production; and
- alternative fuels and energy sources.

Access:

TULSA is available through the ORBIT information retrieval system. For information about how to access ORBIT, consult Appendix A.

Cost:

The cost of conducting a search on TULSA is $75 per connect hour and $0.15 per citation.

Sample Search/Output:

```
SS  1/C?
USER:
PHTHALATE ESTER#

PROG:
NO PSTG  (PHTHALATE ESTER#).

SS  1/C?
USER:
PATHALATE AND ESTER:

PROG:
MM  (ESTER:)  (12)
                 1  ESTER/TI
                 2  ESTER/IT
                 3  ESTEREL/TI
                 4  ESTEREL MASSIE/IT
                 5  ESTERHAZY/TI
                 6  ESTERIFICATION/TI
                 7  ESTERIFICATION/IT
                 8  ESTERO/TI
                 9  ESTERO FRANCO FM/IT
```

Sample Search/Output (continued):

```
                 10  ESTERON/TI
                 11  ESTERON BASIN/IT
                 12  ESTERS/TI
   SPECIFY NUMBERS, ALL, OR NONE

   USER:
   ALL
   PROG:
   SS  1 PSTG (1)

   SS  2/C?
   USER:
   PRINT FULL

   PROG:

   -1-
   AN  -  ANTIFOULING MARINE COATING COMPOSITION
   AU  -  WILLEY M M
   SO  -  U S 3,898,190, C 8/5/75, F 3/11/74; DU PONT DE NEMOURS & CO
   EY  -  1975
   IT  -  ACID; *ADDITIVE; ADHESIVE; *ANTIFOULING AGENT; CALCIUM CARBONATE;
          CARBONATE; CHEMICAL; *COATING MATERIAL; COMPOSITION; COMPOUND;
          CONCENTRATION; COPPER OXIDE; CUO; DATA; DOCK; DU PONT DE NEMOURS
          & CO; ELASTROMER; ENGLISH; ENVIRONMENT; ESTER; *EXTERNAL COATING;
          FLOW PROPERTY; FLUORIDE; HALOHYDROCARBON; HYDROCARBON COMPOUND;
          LIQUID VISCOSITY; MARINE ENVIRONMENT; *MARINE FOULING: MARINE
          ORGANISM; MARINE TRANSPORTATION; ORGANIC; ORGANIC ACID;
          ORGANOMETALLIC COMPOUND; OXIDE; PATENT (A); PHTHALATE; PHTHALIC
          ACID; PHYSICAL PROPERTY; *PIGMENT; PIPELINE; PIPELINING, SHIP+
          STORAGE; *PLASTICIZER; POLYMER; PORT FACILITY; ROSIN ACID; SEA
          TERMINAL; SHIP; SOLVENT; SYNTHETIC RUBBER; TABLE (DATA); TOLUENE;
          TOXIC EFFECT: TRANSPORTATION; TRANSPORTATION TERMINAL; TRIBUTYL
          TIN FLUORIDE; TRIBUTYL TIN OXIDE; TRICRESYL PHOSPHATE; UNDERWATER
          PIPELINE; VEHICLE; VISCOSITY; (P) USA
```

UPGRADE

Scope:

User Prompted Graphic Data Evaluation (UPGRADE) is a system for analyzing data about the environment, natural resources, health effects, etc.

The UPGRADE System makes available to the user different types of data from many sources. These sources are primarily government agencies with databases or programs supplying data useful to environmental analysis. UPGRADE provides the means of putting together these various data types to produce integrated analyses or assessments.

The following databases are available in UPGRADE, including some of the subsets that have been defined within these databases.

- STORET (Water Quality) - 1800 water quality parameters from 200,000 collection points, over 40 million total observations. Most observations are for the 200 most important water quality parameters.
  - Major Rivers - general water quality for 12 major rivers.
  - Municipal Sanitary - dissolved oxygen, stream flow, bacteria, ammonia, etc. at upstream and downstream locations from 300 major U.S. cities.
  - Pesticides - USGS measurements of 30 water column and sediment pesticide parameters.
  - Phenols - measurements of ambient phenols at 214 stations around industrial centers of the U.S.
- NASQAN (Water Quality) - Data from the National Stream Quality Accounting Network's 450 monitoring stations in all the major subbasins in the U.S.
- INTEGRATED DATA BASE (IDB) - correlates environmental and health data.
- SAROAD (Air Quality) - daily maximum values of 96 parameters, back to 1970.

Some of the statistical functions available in UPGRADE include:

- stepwise regression,
- general linear regression,
- time-series analysis,
- frequency and cross tabulation tables, and
- general correlation matrices.

All data in UPGRADE are formatted in one of two ways--time-series or cross-sectional. Time-series data are site specific and will usually contain several values (observations) for each parameter at each site. UPGRADE interfaces that conform to this format are the Water Quality, Air Quality and NASQAN interfaces.

Cross-sectional data are on the level of a geographic or political unit such as the county. Observations for a parameter are statistically aggregated over time and sites to yield one data value per parameter per geographic or political unit. At the present time, cross-sectional data in UPGRADE are available through the Integrated Database (IDB) at the county and state levels. Data at the levels of other geographic or political units will be available in the future.

The UPGRADE components are large collections of data, from which subsets of data, called datasets, are extracted to meet specific needs or to be used in specific studies. The UPGRADE User Support Group performs this data subsetting procedure for data from the STORET and SAROAD databases. From the NASQAN and IDB databases, users can construct datasets themselves by means of an interactive data extraction program which operates in the same manner as UPGRADE. The extracted datasets contain the data which are accessed and analyzed by UPGRADE through one of the interfaces. The user, while employing UPGRADE, does not have the interactive, online access to the master databases.

Access:

UPGRADE is designed to run on an IBM 360/370 computer equipped with TSO. TSO is IBM's acronym for "Time Sharing Option." It is not really necessary to understand the operation of TSO on an IBM computer. It is only necessary to know that UPGRADE operates under TSO. Moreover, other computer manufacturers have systems which are essentially equivalent to TSO, and UPGRADE can be adapted to run under these systems. TSO controls the operation of the interactive terminal session, the interaction between the UPGRADE terminal operator and the UPGRADE computer program and datasets. To use any interactive program, the user must "Log on" to the TSO system and request TSO to execute the program. When one asks TSO to execute a program, the TSO system locates the program, loads it in the memory of the computer, and starts its operation.

Information regarding initiation of UPGRADE service is available from:

Steve Fullerton
Sigma Data Computing Corporation
2021 K Street, N.W.
Washington, D.C. 26006
(202) 223-8863

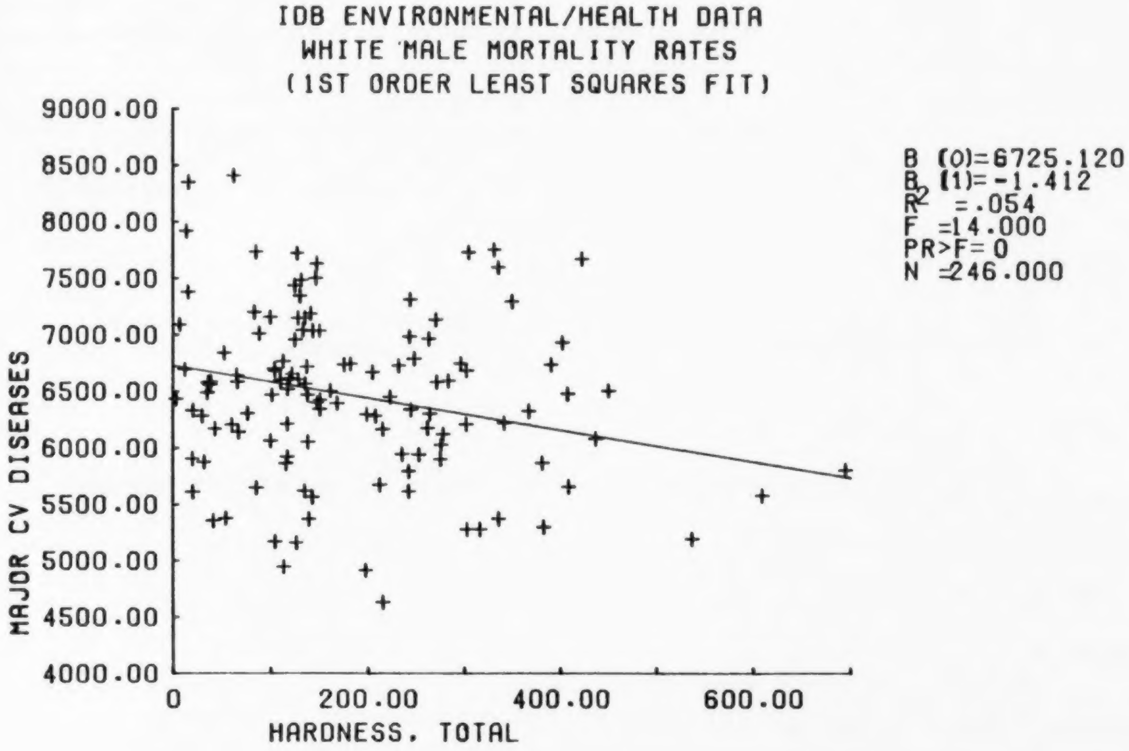
Government agencies interested in initiating UPGRADE service should contact:

Dr. John D. Buffington
Council on Environmental Quality
722 Jackson Place, N.W.
Washington, D.C. 20006
(202) 395-5760

Cost:

Not available.

Sample Search/Output:



USDA/CRIS

Scope:

USDA/CRIS provides access to agricultural and related research information. The projects described in USDA/CRIS cover current research in agriculture and allied sciences, sponsored or conducted by USDA research agencies, state agricultural experiment stations, state forestry schools, and other cooperating state institutions.

USDA/CRIS reports on a wide range of topics, including such areas as the following:

- Biological Sciences
- Physical Sciences
- Engineering
- Social and Behavioral Sciences
- Natural Resource Conservation
- Family Life
- Housing
- Environmental Protection
- Outdoor Recreation
- Fish and Wildlife
- Resource Management
- Marketing and Economics
- Food and Nutrition
- Consumer Health and Safety
- Textiles and Clothing
- Rural Development
- Forestry
- Education and Communication
- Community Development
- Area and Regional Development

Access:

USDA/CRIS is available through the DIALOG information retrieval system. For information about how to access DIALOG, consult Appendix A.

Cost:

The cost of conducting a search on USDA/CRIS is $40 per connect hour and $0.10 per citation.

Sample Search/Output:

```
? BEGIN 60
        28feb78 14:13:50 User316
  $0.15  0.006 Hrs File1*
File60:USDA/CRIS 75-MAR78
        Set Items Description (+=OR;*=AND;-=NOT)
        --- ----- ------------------------------
? SELECT CLAM; SELECT CLAMS; SELECT LOBSTER?; SELECT OYSTER?; SELECT SHRIMP?
          1     23 CLAM
          2     26 CLAMS
          3     14 LOBSTER?
          4     42 OYSTER?
          5     76 SHRIMP?
? SELECT SCALLOP?; SELECT SM=SO822
          6      9 SCALLOP?
          7    110 SM=SO822
```

Sample Search/Output (continued):

```
? COMBINE 1-7/OR
           8   197  1-7/OR
? SELECT MARKET?: SELECT AC=A6100: SELECT AC=A6200
           9  2947 MARKET?
          10   115 AC=A6100
          11   141 AC=A6200
? COMBINE 9-11/OR
          12  3000  9-11/OR
? SELECT FRESHWATER: SELECT FRESH(W)WATER: COMBINE 13 OR 14
          13     70 FRESHWATER
          14     73 FRESH(W)WATER
          15    118  13 OR 14
? COMBINE (8 AND 12) NOT 15
          16     35  (8 AND 12) NOT 15
? TYPE 16/6
16/6/1

0071310        AGENCY ID: SAES NEV   PROJ NO: NEV00355
PERIOD: 13 AUG 76  TO  31 DEC 77     INVEST: TAYLOR  R
PERF ORG: VETERINARY MEDICINE        LOCATION: UNIV OF NEVADA
                                               RENO              NEV

PRODUCTION  OF  MACROBRACHIUM  ROSENBERGII  (GIANT  MALAYSIAN PRAWN IN
NEVADA)

? TYPE
16/6/2

0068219        AGENCY ID: CSRS CONS  PROJ NO: CONS00466
PERIOD: 01 JUL 75  TO  30 JUN 78     INVEST: LEONARD  R L
PERF ORG: AGRI ECONOMICS & RURAL S  LOCATION: UNIV OF CONNECTICUT
          OCIOL                                STORRS            CON

ECONOMICS OF PRODUCING AND MARKETING LONG ISLAND SOUND OYSTERS

? PRINT 16/5/1-35/AS/PN
Printed16/5/1-35/AS/PN
? LOGOFF
         28feb78 14:17:38 User316
  $2.60  0.065 Hrs File60 12 Descriptors
  $3.50  35 Prints
  $6.10  Estimated Total Cost
LOGOFF 14:17:45
```

USP

Scope:

The Pharmacopeia of the United States of America, (USP) Nineteenth Edition (USP XIX), is a handbook of standards and guidelines concerning the quality of drug products. The USP is generated and disseminated by the United States Pharmacopeia Convention, Inc. This book and the National Formulary are the official drug and drug regulations compendia of the U.S.

The Pharmacopeia is organized into several sections: Monographs, General, Reagents, Tables, and an Index:

- The Monographs Section, with 1284 monographs, includes drug substance and dosage forms, pharmaceutic ingredients, chemical identification, usual adult and pediatric dosage, drug category, physical description, solubility, packaging, labelling and storage procedures, and standards for purity and strength, with specified analytical testing procedures.
- The General Section presents methods for various biological, microbial, chemical, and physical tests and assays for drug ingredients including necessary testing equipment.
- The Reagents Section presents information on standards and preparation of reagents, indicators, and solutions used in drug testing. Buffer, colorimetric, test, and volumetric solutions are covered, as are indicator test papers.
- The Tables are a series of chemical identification tables and measurement equivalents arranged alphabetically.
- The Index is referenced by drug, substance, and chemical names.

Additionally, each edition of the Pharmacopeia lists significant changes which have been made since the preceding edition, such as the omission of previously listed drugs.

The Committee of Revision, composed of volunteer experts from academia, the drug industry, government, and private medical practice, is responsible for the complete revision of the Pharmacopeia every five years; regular issuance of "USP Comment Proof" which reports proposed revisions; and the bimonthly "Pharmacopeial Forum" which reports standard developments and official revisions.

Cumulative annual supplements to the USP are published every January. Urgent revisions are published as needed as "Interim Revision Announcements."

Access:

USP XIX is available from:

United States Pharmacopeial Convention, Inc.
12601 Twinbrook Parkway
Rockville, Maryland 20852
(301) 881-0666

Mack Publishing Company, Inc.
20th and North Hampton Streets
Easton, Pennsylvania 18042
(215) 258-9111

The Pharmacopeial Forum, a bimonthly newsletter is also available from USP Convention, Inc. for a subscription fee of $40.00 per year.

Cost:

USP XIX currently costs $28.00.

Sample Search/Output:

Not applicable.

WDROP

Scope:

WDROP (Water Distribution Register of Organic Pollutants) is a collection of data concerning the concentration of organic chemicals found in water and sediments, along with where, when, and how these chemicals were found. The data is extracted from all sources available, including the open literature, proceedings of meetings, internal government reports, and private communications. The development of this system is supported by the EPA-Athens Laboratory in Georgia. WDROP is an online interactive database component of the EPA-NIH Chemical Information System (CIS). It contains information regarding organic compounds identified in water and sediments. Compound name(s), concentration, Chemical Abstracts Service (CAS) Registry number, molecular weight and formula, Wiswesser Line Notation, sampling site and data, and reporting laboratory analytical method used are among the items which will be recorded for organic compound testing of polluted and non-polluted water body and sediment samples. Information will be derived from the open literature, data previously collected by EPA, other government agencies, individual contributing researchers, and laboratories, and will be reviewed and validated prior to inclusion in WDROP. Periodic publication of collected data is planned.

Access:

WDROP is available through the Chemical Information System (CIS). For information about how to access CIS, consult Appendix A.

Cost:

WDROP searches cost $36 per hour. In addition to search costs, there is an annual $300 subscription fee, which is used to defray storage costs.

Sample Search/Output:

```
                 FILE 10:  ELEMENT       5
CITATION NUMBER =          18026
Benzene (71-43-2)
Water solubility:  0.082g /100ml at 22 Deg.   C;  Boiling point:
80.099 Deg. C; tapwater; grab sample; volatile organic analysis;
Monitoring started:  Aug/?/1975;  Monitoring ended:  Sep/?/1976;
Latitude:   41.53.45; Longitude:   87.36.20;  Zip code:   60600;
Chicago Central Water Works,   Lake Shore Drive and Ohio Street:
Chicago, IL,  USA; Analysis Method:  GC/MS Specific method:  EI;
Confidence rating:  probable;  range 4.  uG/L;  Laboratory code:
0101;  Coden:  EPA4--
```

WORLD TEXTILES

Scope:

WORLD TEXTILES, produced by the Shirley Institute and collaborating Research Associations Hatra and Wira, provides coverage of world literature on the science and technology of textile and related materials; on the technical economics, production, and management of the textile industry; and on the consumption of and international trade in textile materials and products. It offers comprehensive coverage of the world's textile relevant literature as recorded from about 500 international primary and secondary sources since January, 1970.

WORLD TEXTILES covers a wide range of textile-relevant subject matter:

- Synthesis, Physics, and Chemistry of Polymers for Fibers
- Science, Technology, Properties, Products, and Utilization of Fibers, Yarns, and Fabrics
- Chemical and Mechanical Treatment of Textiles
- Technical Management and Economics of Production Processes
- Production, Consumption, and International Trade Data
- Test Methods, Quality Control, Specifications, Standards, and Legislation
- Pollution, Safety, and Health Hazards
- Utilization of Textiles in Industrial, Medical, and Other Applications

Access:

WORLD TEXTILES is available through the DIALOG information retrieval system. For information about how to access DIALOG, consult Appendix A.

Cost:

The cost of conducting a search on WORLD TEXTILES is $55 per connect hour and $0.10 per citation.

Sample Search/Output:

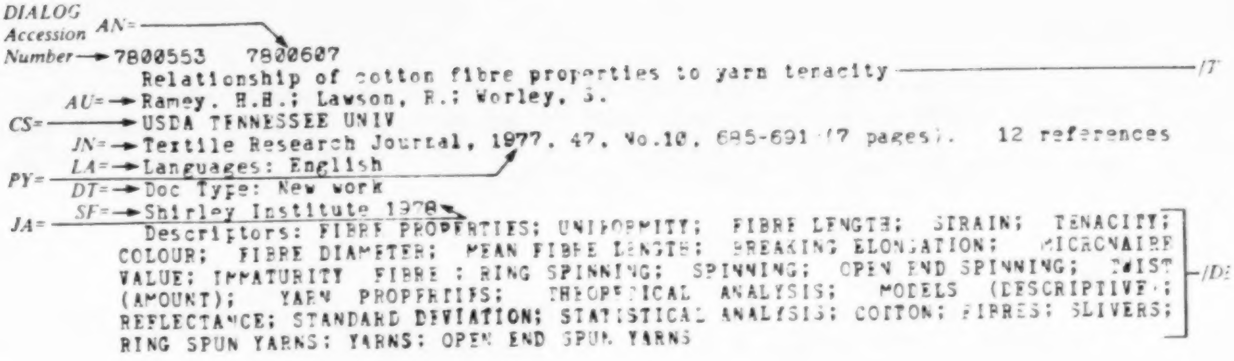
```
? BEGIN 67
          25jan79 8:23:35 User3331
  $0.55  0.010 Hrs File67
File67:WORLD TEXTILES 70-78/NOV
          Set Items Description (+=OR;*=AND;-=NOT)
          --- ----- -----------------------------
? SELECT NONWOVEN; SELECT NON(W)WOVEN; SELECT NON(W)WOVENS
            1  3838 NONWOVEN
            2    22 NON(W)WOVEN
            3     2 NON(W)WOVENS
? COMBINE 1-3/OR
            4  3839  1-3/OR
? SELECT DISPOSABLE?
            5   142 DISPOSABLE?
? SELECT DT=PATENTS
            6 28980 DT=PATENTS
? COMBINE 4-6/AND
            7    63  4-6/AND
? TYPE 7/3/1-3
7/3/1
7806389   7807127
  Soft absorbent fibrous web and disposable diaper including same
  Schmidt, F.P.
  SCOTT PAPER
  Scott Paper Co.
  USP 4,093,765,

7/3/2
7804727   7805253
  Nonwoven material for disposable wet wipes
  DEXTER
  Dexter Corp.
  BP 1,510,667,

7/3/3
7804723   7805249
  Method of manufacturing water-unstable fibrous products
  VUPC
  Vyskumny Ustav Papieru a Celulozy
  BP 1,510,009,

? PRINT 7/5/1-63
Printed7/5/1-63
? LOGOFF
          25jan79 8:25:40 User3331
  $1.98  0.036 Hrs File67 7 Descriptors
  $6.30  63 Prints
  $8.28  Estimated Total Cost
LOGOFF  8:25:43
```

Sample Search/Output (continued):


DIALOG Accession Number
AN=
/TI
AU=
CS=
JN=
LA=
PY=
DT=
SF=
JA=
/DE

```
7800553   7800607
     Relationship of cotton fibre properties to yarn tenacity
     Ramey, H.H.; Lawson, R.; Worley, S.
     USDA TENNESSEE UNIV
     Textile Research Journal, 1977, 47, No.10, 685-691 (7 pages).   12 references
     Languages: English
     Doc Type: New work
     Shirley Institute 1978
     Descriptors: FIBRE PROPERTIES; UNIFORMITY;  FIBRE LENGTH;  STRAIN;  TENACITY;
  COLOUR;  FIBRE DIAMETER;  MEAN FIBRE LENGTH;  BREAKING ELONGATION;   MICRONAIRE
  VALUE; IMMATURITY  FIBRE : RING SPINNING;  SPINNING;  OPEN END SPINNING;  TWIST
  (AMOUNT);   YARN  PROPERTIES;   THEORETICAL  ANALYSIS;   MODELS  (DESCRIPTIVE);
  REFLECTANCE; STANDARD DEVIATION; STATISTICAL ANALYSIS; COTTON; FIBRES; SLIVERS;
  RING SPUN YARNS; YARNS; OPEN END SPUN YARNS
```

XTAL

Scope:

The X-ray Single Crystal Search System (XTAL) is a search system of the Crystal Determinative Tables published by the National Bureau of Standards and the Joint Committee on Powder Diffraction Standards. The space group, density, unit cells, and chemical types are searchable.

Access:

XTAL is available through the Chemical Information System (CIS). For information on how to access CIS, consult Appendix A.

Cost:

XTAL searches cost $36 per hour. In addition to the search costs, there is a $300 subscription fee, which is used to defray storage costs.

Sample Search/Output:

Not available.

APPENDIX A

Access information for:

- The Chemical Information System
- MEDLARS
- ORBIT
- DIALOG

CIS

The Chemical Information System (CIS) is a collection of 14 databases and computer programs capable of identifying and manipulating chemical data. CIS is operated by Interactive Sciences Corp. for the National Institute of Health and the Environmental Protection Agency. The cost of using CIS ranges from $36 to $60 dollars per connect hour. In addition, there is a $300 annual subscription charge that is used to defray storage costs. The following resources, described in this handbook, are available from CIS:

- OHM-TADS
- RTECS
- CNMR
- MSSS
- SANSS
- WDROP
- XTAL
- FRSS

For additional information concerning the CIS databases, to open an account, or to receive formal training, contact:

Kay Pool or Charlie Sullivan
Interactive Sciences Corporation
2135 Wisconsin Avenue, N.W.
Suite 400
Washington, DC 20007
(800) 424-9600 or (202) 298-6200

EPA personnel should contact:

Bill Allen
EPA Mail Code 18
Research Triangle Park, NC
(919) 541-2123 or (FTS) 629-2123

MEDLARS

MEDLARS is the Medical Literature Analysis and Retrieval System operated by the National Library of Medicine. The cost of searching the MEDLARS databases ranges from $8 to $30 per hour depending on the database and the time of day the search is conducted. The following resources, described in this handbook, are available from MEDLARS:

- CANCERLIT
- CHEMLINE
- MEDLINE
- RTECS
- TDB
- TOXLINE
- TOX-TIPS

For further information or to open an account, contact:

The National Library of Medicine
MEDLARS Management Section
8600 Rockville Pike
Bethesda, Maryland 20209
(800) 638-8480 or (301) 496-6193

ORBIT

ORBIT is a commercially operated automated bibliographic retrieval service produced by the System Development Corporation. The following resources, described in this handbook, are available from ORBIT:

- AGRICOLA
- APILIT
- APIPAT
- BIOSIS PREVIEWS
- CHEMICAL ABSTRACTS
- CIN
- COMPENDEX
- CRECORD
- ENERGY LINE
- ENVIROLINE
- FEDERAL INDEX
- FSTA
- INSPEC
- ISMEC
- NTIS
- OA
- PAPERCHEM
- POLLUTION ABSTRACTS
- SSIE
- TITUS
- TULSA

For additional information concerning the over 60 ORBIT databases, to open an account, or to receive formal training, contact:

SDC Search Service
2500 Colorado Avenue
Santa Monica, CA 90406
(800) 421-7229 or (213) 829-9463

DIALOG

DIALOG is a commercially operated bibliographic retrieval service produced by Lockheed Missiles & Space Co., Inc. The following resources, described in this handbook, are available from DIALOG

- AGRICOLA
- APTIC
- BISOIS REVIEWS
- CAB ABSTRACTS
- CDA
- CHEMICAL ABSTRACTS
- CHEMNAME
- CIN
- CLAIMS/CHEM
- CLAIMS/CLASS
- COMPENDEX
- EIS PLANTS
- ENERGYLINE
- ENVIROLINE
- FEDERAL INDEX
- FSTA
- INSPEC
- ISMEC
- METADEX
- NTIS
- OA
- PIRA
- POLLUTION ABSTRACTS
- PREDICASTS
- SCISEARCH
- SPIN
- SSIE
- USDA/CRIS
- WORLD TEXTILES

For additional information concerning the over 100 DIALOG databases, to open an account, or to receive formal training, contact:

Lockheed Information Systems
Customer Services (5280/580)
3640 Hillview Avenue
Palo Alto, CA 94304
(800) 982-5838 or (415) 858-3788